

Curriculum
for
Local Road Supervisor
(LRS)



Council for Technical Education and Vocational Training
Curriculum Development Division
Sanothimi, Bhaktapur
2009

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Introduction

This curriculum for Local Road Supervisor is designed to produce lower level technical workforce equipped with knowledge and skills related to local road supervision. It makes the trainees able to get opportunities for wage and self-employment in the related occupational field.

Aim

To produce lower level road construction workers (Local Road Supervisors) able to provide local road supervision services in the community being even an entrepreneur/employee/self employed.

Objectives

After the completion of this training program, the trainees will be able:

- To handle/maintain tools/materials/equipment
- To enforce safety rules
- To assist for field survey
- To perform simple calculations/estimations
- To read/Interpret/ prepare drawings /sketches
- To perform setting out/layout
- To supervise earth road construction
- To supervise gravel road construction
- To supervise metalled road construction
- To supervise wall construction
- To supervise cross drainage construction
- To supervise roadside drain construction
- To supervise bio-engineering works
- To perform road maintenance works
- To manage construction works
- To manage health/environment
- To communicate with others
- To maintain records
- To grow professionally
- To develop entrepreneurial skills
- To facilitate for social mobilization

Course description

This curriculum provides skills & knowledge necessary for Local Road Supervisor. There will be both demonstration by instructors/trainers and opportunity by trainees to perform skills/tasks specified in this curriculum. Trainees will practice & learn skills using typical tools, materials, equipment & machines necessary for the program.

After successful completion of this program the trainees will be equipped with the knowledge and skills related to handle/maintain tools/materials/equipment, enforce safety rules, assist for field survey, perform simple calculations/estimations, read/Interpret/ prepare drawings /sketches, perform setting out/layout, supervise earth road construction, supervise gravel road construction, supervise metalled road construction, supervise wall construction, supervise cross drainage construction, supervise roadside drain construction, supervise bio-engineering works, perform road maintenance works, manage construction works, manage health/environment, communicate with others, maintain records, grow professionally, develop entrepreneurial skills, and facilitate for social mobilization,

Course structure of Local Road Supervisor

	Modules/sub modules	Nature	Time (Hours)			Marks		
			Th.	Pr.	Tot.	Th.	Pr.	Tot.
	1. Tools, materials, equipment, and safety (18)	T + P	5	13	18	3	12	15
11	1. Tools, materials and equipment	T + P	2	9	11			
7	2. Enforcing safety rules	T + P	3	4	7			
	2. Field survey(15)	T + P	9	36	45	7	28	35
	3. Calculations and drawings(13)	T + P	4	18	22	3	12	15
6	1. Calculations/estimations	T + P	2	6	8			
7	2. Drawings /sketches	T + P	2	12	14			
	4. Setting out/layout(10)	T + P	6	24	30	5	20	25
	5. Supervising road construction(24)	T + P	13	59	72	10	40	50
12	1. Supervising earth road construction	T + P	6	30	36			
5	2. Supervising gravel road construction	T + P	3	12	15			
7	3. Supervising metalled road construction	T + P	4	17	21			
	6. Supervising wall, drainage and drain(31)	T + P	18	75	93	15	60	75
15	1. Supervising wall construction	T + P	9	36	45			
9	2. Supervising cross drainage construction	T + P	5	22	27			
7	3. Supervising roadside drain construction	T + P	4	17	21			
	7. Supervising bio-engineering works(5)	T + P	2	8	10	2	8	10
	8. Road maintenance works(5)	T + P	3	12	15	2	8	10
	9. Management(51)	T + P	13	56	69	10	40	50
6	1. Managing construction works	T + P	3	15	18			
8	2. Managing health/environment	T + P	2	6	8			
10	3. Communicating with others	T + P	2	8	10			
11	4. Maintaining records	T + P	2	9	11			
10	5. Growing professionally	T + P	2	8	10			
6	6. Developing entrepreneurial skills	T + P	2	10	12			
	10. Social mobilization(8)	T + P	8	8	16	3	12	15
	(180) Sub- total:		81	309	390	60	240	300
	11. On the job training (OJT)	P	0	160	160		100	100
	Total:		81	469	550	60	340	400

Duration

The total duration of the course will be of 550 hrs [390 hours (three months) in house plus 160 hrs. (One month) OJT]

Target group

All interested individuals in the field of road construction with educational prerequisite of class eight pass.

Group size

Maximum of thirty

Medium of instruction

Nepali or English or both

Pattern of attendance

- 80% attendance in theory
- 90% in practical/ performance

Focus of curriculum

This curriculum emphasizes on competency /performance. 80% time is allocated for performance and only 20% for related technical knowledge. So the focus will be on performance of the specified competencies in the curriculum

Entry criteria

- Minimum of eight class pass or equivalent
- Age range: 18 to 35 years old
- Physically fit
- Should pass entrance examination

Follow up suggestions

In order to assess the success of this program and collect feedbacks/ inputs for the revision of the curriculum a schedule of follow up is suggested as follows:

- First follow up: - Six months after the completion of the program
- Second follow up: - Six months after the completion of the first follow up
- Follow up cycle: - In a cycle of one year after the completion of the second follow up for five years

Certificate

The related training institute will provide the certificate of **“Local Road Supervisor ”**. Again, individuals who complete module (s) of the curriculum will receive a certificate of completion of the particular module(s).

Grading

- Distinction: passed with 80% or above
- First division: passed with 75% or above
- Second division: passed with 65% or above
- Third division: passed with 60% or above

Students evaluation

- Continuous evaluation of the trainees' performance is to be done by the related instructor/ trainer to ensure the proficiency over each competency under each of the sub-module.
- Related technical knowledge learnt by trainees will be evaluated through written or oral tests.
- Trainees must secure minimum marks of 60% in an average of both theory and practical evaluations.

- There will be three internal evaluations and one final evaluation in each module.
- The entrance test will be conducted by the concerned training institute

Trainers qualification

- Diploma in civil engineering. or equivalent in related field
- Good communicative and instructional skills
- Experience in related field

Trainer-trainees ratio

- 1:10 for practical classes
- For theory, as per the class room situation

Suggestions for instructor

Suggestions for instruction

1. Select objectives

- Write objectives of cognitive domain
- Write objectives of psychomotor domain
- Write objectives of affective domain

2. Select subject matter

- Study subject matter in detail
- Select content related to cognitive domain
- Select content related to psychomotor domain
- Select content related to affective domain

3. Select instructional methods

- Teacher centered methods: like lecture, demonstration, questions answer inquiry, induction and deduction methods.
 - Student initiated methods like experimental, field trip/excursion, discovery, exploration, problem solving, and survey methods.
 - Interaction methods like discussion, group/team teaching, microteaching and exhibition.
 - Dramatic methods like role play and dramatization
4. Select Instructional method (s) on the basis of objectives of lesson plans and KAS domains
 5. Select appropriate educational materials and apply at right Time and place.
 6. Evaluate the trainees applying various tools to correspond the KAS domains
 7. Make plans for classroom / field work / workshop organization and management.
 8. Coordinate among objectives, subject matter and instructional methods.
 9. Prepare lesson plan for Theory and Practical classes.
 10. Deliver /conduct instruction / program
 11. Evaluate instruction/ program

Suggestion for the performance evaluation of the trainees

1. Perform task analysis
2. Develop a detail task performance checklist
3. Perform continuous evaluation of the trainees by applying the performance checklist.

Suggestion for skill training

Demonstrate performance

1. Demonstrate task performance in normal speed
2. Demonstrate slowly with verbal description of each and every step in the sequence of activity of the task performance using question and answer techniques.
3. Repeat 2 for the clarification on trainees demand if necessary
4. Perform fast demonstration of the task.

Provide trainees the opportunities to practice the task performance demonstration

1. Provide trainees to have guided practice
2. Create environment for practicing the demonstrated task performance
3. Guide the trainees in each and every step of task performance
4. Provide trainees to repeat and repeat as per the need to be proficient on the given task performance
5. Switch to another task demonstration if and only trainees developed proficiency in the task performance.

Other suggestions

1. Apply principles of skill training
2. Allocate 20% Time for Theory classes and 80% Time for task performance while delivering instructions
3. Apply principles of adult learning
4. Apply principles of intrinsic motivation
5. Facilitate maximum trainees involvement in learning and task performance activities
6. Instruct the trainees on the basis of their existing level of knowledge, skills and attitude.

Tools, equipment and materials

- Stationary
- Marker pen
- Brown paper
- Chalk duster
- Clear bag
- Photocopy bag
- Measuring tape
- Abney level
- Staff
- Ranging rod
- Plumbub
- Try square
- Sprit level
- level pipe
- Hammer (small+ big)
- Shovel
- Trovel (Karni)
- Khukuri
- Pick
- Wheelbarrow
- Pan
- Jumper
- Chisel
- Thread
- Calculator
- Graph paper
- Clutch Pencil
- Pencil lead
- Eraser
- Spadle
- Enamel + brush
- Cement
- Sand screener
- Sand
- Concrete
- Stone
- Square
- Jebro Textile
- Helmet
- axe
- Gumboot
- Gloves
- Goggles
- Mask
- Record note pad
- Altimeter
- Theodolite
- Compass

Reading materials:

1. Highway Engineering – Khamne & Justo
2. Civil Engineering handbook – Khanna & Khanna
3. Surveying – B.C. Puania
4. Bio-Engineering, DOR
5. Best Practices : Green Road Construction – GTZ
6. DOLIDAR Approaches Manual for District Transport Master Plan, Norms, Specification
7. Engineering Method – Sushil Guman
8. Construction Supervision Manual – DOLIDAR
9. Gramin Sadaka Tatha Samhar Pustika (u | fld) f ; * s tyf ; + ef / k ' l : tsf) – DOLIDAR
10. Technical Curriculum
11. Nepal Road Standards
12. Ley men working Guideline
13. Concrete technology
14. Social Mobilization manual
15. Batawaran Pustika (aftfj /) f k ' l : tsf)

Facilities:

- Well equipped enough class/ office rooms
- A / V room
- Transportation facilities/ Vehicle
- Laboratory / library
- OHP/computers with CD ROM attachment / pictures/
- Multimedia presentation set /Slide presenter
- Hostel/canteen /drinking water
- Electricity

Modules and sub-modules

Module: 1: Tools, materials, equipment, and safety

Sub-module:1: Tools, materials and equipment

Sub-module:2: Enforcing safety rules

Module: 2: Field survey

Module: 3: Calculations and drawings

Sub-module:1: Calculations/estimations

Sub-module:2: Drawings /sketches

Module: 4: Setting out/layout

Module: 5: Supervising road construction

Sub-module:1: Supervising earth road construction

Sub-module:2: Supervising gravel road construction

Sub-module:3: Supervising metalled road construction

Module: 6: Supervising wall, drainage and drain

Sub-module:1: Supervising wall construction

Sub-module:2: Supervising cross drainage construction

Sub-module:3: Supervising roadside drain construction

Module: 7: Supervising bio-engineering works

Module: 8: Road maintenance works

Module: 9: Management

Sub-module:1: Managing construction works

Sub-module:2: Managing health/environment

Sub-module:3: Communicating with others

Sub-module:4: Maintaining records

Sub-module:5: Growing professionally

Sub-module:6: Developing entrepreneurial skills

Module: 10: Social mobilization

Modules, sub-modules, objectives and tasks

Module: 1: Tools, materials, equipment, and safety

Sub-module:1: Tools, materials and equipment

Objective: Handle/maintain tools/materials/equipment

Tasks:

1. Handle measuring tape
2. Handle pedometer
3. Handle altimeter
4. Level pipe/sprit level
5. Handle surveyor compass
6. Handle Abney level
7. Handle auto level
8. Handle calculator
9. Operate computer
10. Apply global positioning system
11. Handle wheel barrow

Sub-module:2: Enforcing safety rules

Objective: Enforce Safety Rules

Tasks:

12. Maintain first aid kit box
13. Perform simple/common first aids
14. Enforce safety wares
15. Maintain accidental records
16. Orient/inform about possible risks/hazards
17. Enforce to follow traffic signals
18. Apply fire safety measures

Module: 2: Field survey

Objective: Assist for Field Survey

Tasks:

19. Assist to fix Road Alignment
20. Assist to fix Road Centre line
21. Measure tentative Road Length
22. Assist to Conduct L-section Survey
23. Assist to conduct cross-section Survey
24. Assist to fix Reference Points

25. Fix Bench mark
26. Assist to investigate obligatory points
27. Assist to conduct Traverse Survey
28. Conduct Labor Availability Survey
29. Conduct Local Construction Materials Survey
30. Assist to conduct Household Survey
31. Assist to perform cadastral Survey
32. Perform Traffic/vehicle count
33. Count trees/cross-drainage hard rock

Module: 3: Calculations and drawings

Sub-module:1: Calculations/estimations

Objective: Perform Simple Calculations/Estimations

Tasks:

34. Calculate area/volume of various geometrical figures
35. Use government norms/rates
36. Read/interpret specifications
37. Estimate/cost materials
38. Estimate/cost equipment/tools
39. Estimate human resources

Sub-module:2: Drawings /sketches

Objective: Read/Interpret/ prepare drawings /sketches

Tasks:

40. Prepare drawing/sketch of Rectangular section
41. Prepare sketch/drawing of Trapezoidal section
42. Read/Interpret plan of road alignment
43. Read/Interpret section of road alignment
44. Read/Interpret deviation of geometrical figures
45. Prepare sketch/drawings of triangular section
46. Prepare sketches/drawings of circular section

Module: 4: Setting out/layout

Objective: Perform setting out/Layout

Tasks:

47. Prepare check list
48. Collect/Identify tools/equipment/materials
49. Perform Measurements

50. Apply 3-4-5 method of layout
51. Perform setting out of centerline (road alignment)
52. Perform setting out of formation width
53. Perform setting out of retaining/breast walls
54. Perform setting out of cross drainage structures
55. Perform setting out of bio engineering works
56. Locate road centerline

Module: 5: Supervising road construction

Sub-module:1: Supervising earth road construction

Objective: Supervise Earth Road Construction

Tasks:

57. Perform site clearance
58. Supervise top soil removal work
59. Perform benching
60. Maintain borrow pit
61. Maintain fill/cut slopes
62. Manage safe disposal of surplus materials
63. Maintain Formation width
64. Maintain camber/upper elevation (S.E.)
65. Maintain longitudinal slope/grade
66. Maintain vertical curves
67. Maintain horizontal curves
68. Maintain compaction density

Sub-module:2: Supervising gravel road construction

Objective: Supervise Gravel Road Construction

Tasks:

69. Control Traffic
70. Maintain gravel sizing
71. Maintain compaction
72. Maintain thickness
73. Maintain edging

Sub-module:3: Supervising metalled road construction

Objective: Supervise Metalled Road Construction

Tasks:

74. Maintain penetration macadam work.
75. Maintain ottaseal

76. Maintain asphalt concrete work
77. Maintain single surface treatment work
78. Maintain double surface treatment work
79. Maintain concrete pavement
80. Maintain stone soling pavement

Module: 6: Supervising wall, drainage and drain

Sub-module:1: Supervising wall construction

Objective: Supervise wall Construction

Tasks:

81. Layout walls
82. Maintain foundation excavation
83. Maintain soling work
84. Maintain foundation PCC/RCC work
85. Maintain Construction joints
86. Maintain weep hole
87. Maintain filter materials
88. Maintain wall dimension
89. Maintain retaining walls
90. Maintain breast wall
91. Maintain toe wall
92. Maintain revetment wall
93. Maintain dry/masonry/composite walls
94. Maintain gabion wall/construction
95. Maintain gabion crate/box weaving

Sub-module:2: Supervising cross drainage construction

Objective: Supervise Cross Drainage Construction

Tasks:

96. Assist for layout
97. Maintain foundation excavation
98. Manage dewatering dimension
99. Maintain line/level of formwork
100. Inspect staging
101. Maintain line level of sub-structure
102. Maintain line level of super-structure
103. Maintain line/level of formwork
104. Maintain protection works

Sub-module:3: Supervising roadside drain construction

Objective: Supervise Roadside Drain Construction

Tasks:

105. Layout for roadside drain
106. Assure/monitor quality of concrete work
107. Maintain dimension of masonry work
108. Maintain dimensions/slopes
109. Supervise plastering
110. Supervise curving
111. Maintain surface/sub-surface drainage

Module: 7: Supervising bio-engineering works

Objective: Supervise Bio-engineering Works

Tasks:

112. Supervise preparation of live stakes grass slips
113. Perform layout
114. Supervise plantation work
115. Supervise caring of plants
116. Protect plants

Module: 8: Road maintenance works

Objective: Perform Road Maintenance Works

Tasks:

117. Supervise routine maintenance
118. Supervise recurrent maintenance
119. Supervise periodic maintenance
120. Supervise emergency maintenance
121. Supervise rehabilitation maintenance

Module: 9: Management

Sub-module:1: Managing construction works

Objective: Manage Construction Works

Tasks:

122. Prepare/follow schedule
123. Manage labor force/road building groups
124. Manage materials

125. Manage machine
126. Manage money
127. Manage minute/document

Sub-module:2: Managing health/environment

Objective: Manage Health/Environment

Tasks:

128. Maintain waste disposal system
129. Manage safe/healthy drinking water
130. Be familiar with communicable diseases
131. Create safe working environment
132. Be familiar with the management of HIV/STD
133. Minimize noise/dust pollution
134. Enforce to manage quarry site
135. Facilitate to dispose unwanted oil

Sub-module:3: Communicating with others

Objective: Communicate with others

Tasks:

136. Make telephone calls
137. Receive telephone calls
138. Write letters
139. Write simple reports
140. Communicate with seniors
141. Communicate with juniors/labors
142. Communicate with peers
143. Communicate with contractors
144. Communicate with users' committee
145. Communicate with user's group

Sub-module:4: Maintaining records

Objective: Maintain Records

Tasks:

146. Keep records of attendance
147. Maintain muster roll
148. Keep records of tools/equipment/materials used
149. Maintain log book
150. Maintain simple A/C books
151. Identify/facilitate to apply various formats of records
152. Apply fire safety measures

153. Maintain daily diary
154. Keep records of work progress
155. Prepare work progress records
156. Submit records/reports to the concerned

Sub-module:5: Growing professionally

Objective: Grow Professionally

Tasks:

157. Attend meetings/seminars/work shops
158. Consult experts
159. Consult professional books/manuals
160. Participate in professional organizations
161. Follow professional rules/regulations/ethics
162. Consult professional journals/magazine
163. Discuss with peers
164. Attend professional trainings
165. Seek/attend for higher education
166. Browse www

Sub-module:6: Developing entrepreneurial skills

Objective: Develop Entrepreneurial Skills

Tasks:

167. Develop small business planning skills
168. Develop small business organizing skills
169. Develop small business direction skills
170. Develop small business controlling skills
171. Prepare a small business plan
172. Prepare a budget for a small business

Module: 10: Social mobilization

Objective: Facilitate for Social Mobilization

Tasks:

173. Facilitate to form users committee
174. Prepare participation schedule
175. Facilitate to form users' group
176. Facilitate to minute decisions
177. Facilitate users' committee meetings
178. Motivate users for participation
179. Facilitate to carry out public audit
180. Facilitate to minimize conflict

Details of modules and sub-modules

Module: 1: Tools, materials, equipment, and safety					
Description: It deals with the knowledge and skills related to the handling of the tools, materials and equipment; and enforcing safety rules necessary for supervising local roads.					
Objectives:					
<ul style="list-style-type: none"> • To handle tools, materials and equipment • To enforce safety rules 					
Sub-modules:					
<ol style="list-style-type: none"> 1. Tools, materials and equipment 2. Enforcing safety rules 					
Sub-module:1: Tools, materials and equipment					
Description: It deals with the knowledge and skills related to the handling of the tools, materials and equipment necessary for supervising local roads.					
Objectives:					
<ul style="list-style-type: none"> • To handle measuring tape • To handle pedometer • To handle altimeter • To handle pipe/sprit level • To handle surveyor compass • To handle Abney level • To handle auto level • To handle calculator • To operate computer • To apply global positioning system • To handle wheel barrow 					
Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.					
		11 hrs. = 2 hrs,(Th,) + 9 hrs,(Pr)	Time (hours)		
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Handle measuring tape	<u>Handling measuring tape:</u> <ul style="list-style-type: none"> • Identification of measuring tape • Functions of measuring tape • Uses/applications of measuring tape • Handling of measuring tape • Care/maintenance of measuring tape • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.9	1.1
2.	Handle pedometer	<u>Handling pedometer:</u>	0.2	0.9	1.1

		<ul style="list-style-type: none"> • Identification of pedometer • Functions of pedometer • Uses/applications of pedometer • Initial setting or zero setting • Handling of pedometer • Care of pedometer • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
3.	Handle altimeter	<u>Handling altimeter:</u> <ul style="list-style-type: none"> • Identification of altimeter • Functions of altimeter • Uses/applications of altimeter • Initial setting • Handling of altimeter • Care/maintenance of altimeter • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1.0
4.	Handle pipe/sprit level	<u>Handling pipe/sprit level:</u> <ul style="list-style-type: none"> • Identification of pipe/sprit level • Functions of pipe/sprit level • Uses/applications of pipe/sprit level • Handling of pipe/sprit level • Care/maintenance of pipe/sprit level • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1.0
5.	Handle surveyor compass	<u>Handling surveyor compass:</u> <ul style="list-style-type: none"> • Identification of surveyor compass • Functions of surveyor compass • Types of surveyor compass • Uses surveyor compass • Handling of surveyor compass • Care/maintenance of surveyor compass 	0.2	0.8	1.0

		<ul style="list-style-type: none"> • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
6.	Handle Abney level	<u>Handling Abney level:</u> <ul style="list-style-type: none"> • Identification of Abney level • Functions of Abney level • Uses/applications of Abney level • Handling/setting of Abney level • Care/maintenance of Abney level • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1.0
7.	Handle auto level	<u>Handling auto level :</u> <ul style="list-style-type: none"> • Identification of auto level • Functions of auto level • Uses/applications of auto level • Handling of auto level • Care/maintenance of auto level • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1.0
8.	Handle calculator	<u>Handling calculator:</u> <ul style="list-style-type: none"> • Identification of calculator • Functions of calculator • Uses/applications of calculator • Handling of calculator • Care/maintenance of calculator • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1.0
9.	Operate computer	<u>Operating computer:</u> <ul style="list-style-type: none"> • Identification of computer • Functions of computer • Uses/applications of computer • Handling of • Operating computer 	0.2	0.8	1.0

		<ul style="list-style-type: none"> Care/maintenance of computer Precautions to be taken while carrying out this task Keeping records of the activities related to this task 			
10.	Apply global positioning system	<u>Applying global positioning system:</u> <ul style="list-style-type: none"> Concept of global positioning system Functions of global positioning system Uses/applications of global positioning system Precautions to be taken while carrying out this task Keeping records of the activities related to this task 	0.1	0.8	0.9
11.	Handle wheel barrow	<u>Handling wheel barrow:</u> <ul style="list-style-type: none"> Identification of wheel barrow Functions of wheel barrow Uses/applications of wheel barrow Handling of wheel barrow Care/maintenance of wheel barrow Precautions to be taken while carrying out this task Keeping records of the activities related to this task 	0.1	0.8	0.9
	Sub-total:		2	9	11
Sub-module:2: Enforcing safety rules					
Description: It deals with the knowledge and skills related to enforcing safety rules necessary for supervising local roads.					
Objectives: <ul style="list-style-type: none"> To maintain first aid kit box To perform simple/common first aids To enforce safety wares/personal protective equipment(PPE) To maintain accidental records To orient/inform about possible risks/hazards To enforce to follow traffic signs To apply fire safety measures 					
Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.					
			7 hrs. = 3 hrs,(Th,) + 4 hrs,(Pr,)	Time (hours)	

SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Maintain first aid kit box	<u>Maintaining first aid kit box:</u> <ul style="list-style-type: none"> • Concept of first aid kit box • Identification of first aid kit box • Functions of first aid kit box • Uses/applications of first aid kit box • Maintaining first aid kit box Care/maintenance of first aid kit box • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.4	0.5	0.9
2.	Perform simple/common first aids	<u>Performing simple/common first aids:</u> <ul style="list-style-type: none"> • Concept of simple/common first aid • Need and importance of simple/common first aids • Principles and procedures for simple/common first aids • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	1.0	1.6
3.	Enforce safety wares/personal protective equipment	<u>Enforcing safety wares:</u> <ul style="list-style-type: none"> • Concept and functions of safety wares • Need and importance of safety wares • Identification of safety wares • Enforcing safety wares • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.4	0.5	0.9
4.	Maintain accidental records	<u>Maintaining accidental records:</u> <ul style="list-style-type: none"> • Concept and uses of accidental records • Why, when, and how of maintaining accidental records • Format for accidental records 	0.4	0.5	0.9

		<ul style="list-style-type: none"> • Precautions to be taken while carrying out this task • Reporting to concerned officials • Keeping records of the activities related to this task 			
5.	Orient/inform about possible risks/hazards	<u>Orienting/informing about possible risks/hazards:</u> <ul style="list-style-type: none"> • Concepts and definitions of risks and hazards • Identification and analysis of possible risks/hazards • Why, when, and how of orienting/informing about possible risks/hazards • Precautions to be taken while carrying out this task • Reporting to concerned officials • Keeping records of the activities related to this task 	0.4	0.5	0.9
6.	Enforce to follow traffic signs	<u>Enforcing to follow traffic signs:</u> <ul style="list-style-type: none"> • Concept of traffic signs • Types of traffic signs • Identification of traffic signs • Interpretation of traffic signs • Why, when, and how of enforcing to follow traffic signs • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.4	0.5	0.9
7.	Apply fire safety measures	<u>Applying fire safety measures:</u> <ul style="list-style-type: none"> • Concept of fire safety measures • Identification of fire safety measures • Why, when, and how of applying fire safety measures • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.4	0.5	0.9
	Sub-total:		3	4	7
Module: 2: Field survey					

	Description: It deals with the knowledge and skills related to field survey necessary for supervising local roads.				
	Objectives: <ul style="list-style-type: none"> • To assist to fix road alignment • To assist to fix road centre line • To measure tentative alignment length (proposed road) • To assist to conduct L-section survey • To assist to conduct cross-section survey • To assist to fix reference points • To fix bench mark • To assist to investigate obligatory points • To assist to conduct traverse survey • To conduct labor availability survey • To conduct local construction materials survey • To assist to conduct household survey • To assist to perform cadastral survey • To perform traffic/vehicle count • To count trees/cross-drainage/hard rock locations 				
	Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.				
		45 hrs. = 9 hrs,(Th,) + 36 hrs,(Pr,)	Time (hours)		
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Assist to fix Road Alignment	<u>Assisting to fix Road Alignment:</u> <ul style="list-style-type: none"> • Concept and importance of fixing road alignment • Why and when of fixing road alignment • Principle and procedure for fixing road alignment • Assisting to fix road alignment • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
2.	Assist to fix Road Centre line	<u>Assisting to fix Road Centre line:</u> <ul style="list-style-type: none"> • Concept and importance of fixing road centre line • Why and when of fixing road centre line • Principle and procedure for fixing road centre line • Assisting to fix road centre line • Precautions to be taken while 	0.6	2.4	3

		<p>carrying out this task</p> <ul style="list-style-type: none"> • Keeping records of the activities related to this task 			
3.	Measure tentative Road Length	<p><u>Measuring tentative Road Length:</u></p> <ul style="list-style-type: none"> • Concept and importance of measuring tentative road length • Why and when of measuring tentative road length • Principle and procedure for measuring tentative road length • Measuring tentative road length • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
4.	Assist to Conduct L-section Survey	<p><u>Assisting to Conduct L-section Survey:</u></p> <ul style="list-style-type: none"> • Concept and importance of conducting L-section survey • Why and when of conducting L-section survey • Principle and procedure for conducting L-section survey • Assisting to conduct L-section survey • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
5.	Assist to conduct cross-section Survey	<p><u>Assisting to conduct cross-section Survey:</u></p> <ul style="list-style-type: none"> • Concept and importance of conducting cross-section survey • Why and when of conducting cross-section survey • Principle and procedure for conducting cross-section survey • Assisting to conduct cross-section survey • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3

6.	Assist to fix Reference Points	<u>Assisting to fix Reference Points:</u> <ul style="list-style-type: none"> • Concept and importance of fixing reference points • Why and when of fixing reference points • Principle and procedure for fixing reference points • Assisting to fix reference points • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
7.	Fix Bench mark	<u>Fixing Bench mark:</u> <ul style="list-style-type: none"> • Concept and importance of fixing bench mark • Why and when of fixing bench mark • Principle and procedure for fixing bench mark • Fixing bench mark • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
8.	Assist to investigate obligatory points	<u>Assisting to investigate obligatory points:</u> <ul style="list-style-type: none"> • Concept and importance of obligatory points • Why and when of investigating obligatory points • Principle and procedure for investigating obligatory points • Assisting to investigate obligatory points • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
9.	Assist to conduct Traverse Survey	<u>Assisting to conduct Traverse Survey:</u> <ul style="list-style-type: none"> • Concept and importance of conducting traverse survey 	0.6	2.4	3

		<ul style="list-style-type: none"> • Why and when of conducting traverse survey • Principle and procedure for conducting traverse survey • Assisting to conduct traverse survey • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
10.	Conduct Labor Availability Survey	<u>Conducting Labor Availability Survey:</u> <ul style="list-style-type: none"> • Concept and importance of conducting labor availability survey • Why and when of conducting labor availability survey • Principle and procedure for conducting labor availability survey • Conducting labor availability survey • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
11.	Conduct Local Construction Materials Survey	<u>Conducting Local Construction Materials Survey:</u> <ul style="list-style-type: none"> • Concept and importance of conducting local construction materials survey • Why and when of conducting local construction materials survey • Principle and procedure for conducting local construction materials survey • Conducting local construction materials survey • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
12.	Assist to conduct Household Survey	<u>Assisting to conduct Household Survey:</u> <ul style="list-style-type: none"> • Concept and importance of conducting household survey • Why and when of conducting household survey 	0.6	2.4	3

		<ul style="list-style-type: none"> • Principle and procedure for conducting household survey • Assisting to conduct household survey • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
13.	Assist to perform cadastral Survey	<u>Assisting to perform cadastral Survey:</u> <ul style="list-style-type: none"> • Concept and importance of cadastral survey • Why and when of performing cadastral survey • Principle and procedure for performing cadastral survey • Assisting to perform cadastral survey • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
14.	Perform Traffic/vehicle count	<u>Performing Traffic/vehicle count:</u> <ul style="list-style-type: none"> • Concept and importance of traffic/vehicle count • Why and when of performing traffic/vehicle count • Principle and procedure for performing traffic/vehicle count • Performing traffic/vehicle count • Format for traffic count • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
15.	Count trees/cross-drainage/hard rock	<u>Counting trees/cross-drainage/hard rock area:</u> <ul style="list-style-type: none"> • Concept and importance of counting trees/cross-drainage/hard rock • Why and when of counting trees/cross-drainage/hard rock area • Principle and procedure for 	0.6	2.4	3

		counting trees/cross-drainage/hard rock <ul style="list-style-type: none"> Counting trees/cross-drainage/hard rock Precautions to be taken while carrying out this task Keeping records of the activities related to this task 			
	Sub-total:		9	36	45
Module: 3: Calculations and drawings					
Description: It deals with the knowledge and skills related to simple calculations/estimations and reading/interpreting/ preparing drawings /sketches necessary for supervising local roads.					
Objectives:					
<ul style="list-style-type: none"> To perform simple calculations/estimations To read/Interpret/ prepare drawings /sketches 					
Sub-modules:					
<ol style="list-style-type: none"> Calculations/estimations Drawings /sketches 					
Sub-module:1: Calculations/estimations					
Description: It deals with the knowledge and skills related to simple calculations/estimations necessary for supervising local roads.					
Objectives:					
<ul style="list-style-type: none"> To calculate area/volume of various geometrical figures To use government norms/rates To read/interpret specifications To estimate/cost materials To estimate/cost equipment/tools To estimate human resources 					
Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.					
		8 hrs. = 2 hrs,(Th.) + 6 hrs,(Pr.)	Time (hours)		
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Calculate area/volume of various geometrical figures	<u>Calculating area/volume of various geometrical figures:</u> <ul style="list-style-type: none"> Concept and importance of calculating area/volume of various geometrical figures Why and when of calculating area/volume of various geometrical figures Principle and procedure for calculating area/volume of various geometrical figures 	0.5	1.0	1.5

		<ul style="list-style-type: none"> • Calculating area/volume of various geometrical figures • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
2.	Use government norms/rates	<u>Using government norms/rates:</u> <ul style="list-style-type: none"> • Concept and importance of using government norms/rates • Why and when of using government norms/rates • Principle and procedure for using government norms/rates • Using government norms/rates • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.3	1.0	1.3
3.	Read/interpret specifications	<u>Reading/interpreting specifications:</u> <ul style="list-style-type: none"> • Concept and importance of reading/interpreting specifications • Why and when of reading/interpreting specifications • Principle and procedure for reading/interpreting specifications • Reading/interpreting specifications • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.3	1.0	1.3
4.	Estimate/cost materials	<u>Estimating/costing materials:</u> <ul style="list-style-type: none"> • Concept and importance of estimating/costing materials • Why and when of estimating/costing materials • Principle and procedure for estimating/costing materials • Estimating/costing materials • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.3	1.0	1.3

5.	Estimate/cost equipment/tools	<u>Estimating/costing equipment/tools:</u> <ul style="list-style-type: none"> • Concept and importance of estimating/costing equipment/tools • Why and when of estimating/costing equipment/tools • Principle and procedure for estimating/costing equipment/tools • Estimating/costing equipment/tools • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.3	1.0	1.3
6.	Estimate human resources	<u>Estimating human resources:</u> <ul style="list-style-type: none"> • Concept and importance of estimating human resources • Why and when of estimating human resources • Principle and procedure for estimating human resources • Estimating human resources • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.3	1.0	1.3
Sub-total:			2	6	8
Sub-module:2: Drawings /sketches					
Description: It deals with the knowledge and skills related to drawings and sketches necessary for supervising local roads.					
Objectives: <ul style="list-style-type: none"> • To prepare drawing/sketch of rectangular section • To prepare sketch/drawing of trapezoidal section • To prepare sketch/drawings of triangular section • To prepare sketches/drawings of circular section • To read/interpret plan of road alignment • To read/interpret section of road alignment • To read/interpret deviation of geometrical figures 					
Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.					
			14 hrs. = 2 hrs,(Th,) + 12 hrs,(Pr,)		
			Time (hours)		
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Prepare drawing/sketch of	<u>Preparing drawing/sketch of</u>	0.3	1.7	2.0

	Rectangular section	<u>Rectangular section:</u> <ul style="list-style-type: none"> • Concept and importance of preparing drawing/sketch of rectangular section • Why and when of preparing drawing/sketch of rectangular section • Principle and procedure for preparing drawing/sketch of rectangular section • Preparing drawing/sketch of rectangular section • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
2.	Prepare sketch/drawing of Trapezoidal section	<u>Preparing sketch/drawing of Trapezoidal section:</u> <ul style="list-style-type: none"> • Concept and importance of preparing sketch/drawing of trapezoidal section • Why and when of preparing sketch/drawing of trapezoidal section • Principle and procedure for preparing sketch/drawing of trapezoidal section • Preparing sketch/drawing of trapezoidal section • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.3	1.7	2.0
3.	Prepare sketch/drawings of triangular section	<u>Preparing sketch/drawings of triangular section:</u> <ul style="list-style-type: none"> • Concept and importance of preparing sketch/drawings of triangular section • Why and when of preparing sketch/drawings of triangular section • Principle and procedure for 	0.3	1.7	2.0

		<p>preparing sketch/drawings of triangular section</p> <ul style="list-style-type: none"> • Preparing sketch/drawings of triangular section • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
4.	Prepare sketches/drawings of circular section	<p><u>Preparing sketches/drawings of circular section:</u></p> <ul style="list-style-type: none"> • Concept and importance of preparing sketches/drawings of circular section • Why and when of preparing sketches/drawings of circular section • Principle and procedure for preparing sketches/drawings of circular section • Preparing sketches/drawings of circular section • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.3	1.8	2.1
5.	Read/Interpret plan of road alignment	<p><u>Reading/Interpreting plan of road alignment:</u></p> <ul style="list-style-type: none"> • Concept and importance of reading/interpreting plan of road alignment • Why and when of reading/interpreting plan of road alignment • Principle and procedure for reading/interpreting plan of road alignment • Reading/interpreting plan of road alignment • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	1.7	1.9

6.	Read/Interpret section of road alignment	<u>Reading/Interpreting section of road alignment:</u> <ul style="list-style-type: none"> • Concept and importance of • Why and when of reading/interpreting section of road alignment • Principle and procedure for reading/interpreting section of road alignment • Reading/interpreting section of road alignment • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.3	1.7	2.0
7.	Read/Interpret deviation of geometrical figures	<u>Reading/Interpreting deviation of geometrical figures:</u> <ul style="list-style-type: none"> • Concept and importance of reading/interpreting deviation of geometrical figures • Why and when of reading/interpreting deviation of geometrical figures • Principle and procedure for reading/interpreting deviation of geometrical figures • Reading/interpreting deviation of geometrical figures • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.3	1.7	2.0
	Sub-total:		2	12	14
Module: 4: Setting out/layout					
Description: It deals with the knowledge and skills related to setting out/layout necessary for supervising local roads.					
Objectives: <ul style="list-style-type: none"> • To task statements • To prepare check list • To collect/identify tools/equipment/materials • To perform measurements • To apply 3-4-5 method of layout • To perform setting out of centerline (road alignment) 					

	<ul style="list-style-type: none"> To perform setting out of formation width To perform setting out of retaining/breast walls To perform setting out of cross drainage structures To perform setting out of bio engineering works To locate road centerline 				
	Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.				
		30 hrs. = 24 hrs,(Th,) + 30 hrs,(Pr,)			
		Time (hours)			
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot
1.	Prepare check list	<u>Preparing check list:</u> <ul style="list-style-type: none"> Concept and importance of check list Why and when of preparing check list Principle and procedure for preparing check list Preparing check list Precautions to be taken while carrying out this task Keeping records of the activities related to this task 	0.6	2.4	3
2.	Collect/Identify tools/equipment/materials	<u>Collecting/Identifying tools/equipment/materials:</u> <ul style="list-style-type: none"> Concept and importance of tools/equipment/materials Why and when of collecting/identifying tools/equipment/materials Principle and procedure for collecting/identifying tools/equipment/materials Collecting/identifying tools/equipment/materials Precautions to be taken while carrying out this task Keeping records of the activities related to this task 	0.6	2.4	3
3.	Perform Measurements	<u>Performing Measurements:</u> <ul style="list-style-type: none"> Concept and importance of measurements Why and when of taking measurements Principle and procedure for taking measurements Performing measurements 	0.6	2.4	3

		<ul style="list-style-type: none"> • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
4.	Apply 3-4-5 method of layout	<u>Applying 3-4-5 method of layout:</u> <ul style="list-style-type: none"> • Concept and importance of 3-4-5 method of layout • Why and when of applying 3-4-5 method of layout • Principle and procedure for applying 3-4-5 method of layout • Applying 3-4-5 method of layout • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
5.	Perform setting out of centerline (road alignment)	<u>Performing setting out of centerline (road alignment):</u> <ul style="list-style-type: none"> • Concept and importance of setting out of centerline (road alignment) • Why and when of setting out of centerline (road alignment) • Principle and procedure for setting out of centerline (road alignment) • Performing setting out of centerline (road alignment) • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
6.	Perform setting out of (cross section for) formation width	<u>Performing setting out of formation width:</u> <ul style="list-style-type: none"> • Concept and importance of setting out (cross section) of formation width • Why and when of setting out of formation width • Principle and procedure for setting out of formation width • Performing setting out of formation width • Precautions to be taken while 	0.6	2.4	3

		<p>carrying out this task</p> <ul style="list-style-type: none"> • Keeping records of the activities related to this task 			
7.	Perform setting out of retaining/breast walls	<p><u>Performing setting out of retaining/breast walls:</u></p> <ul style="list-style-type: none"> • Concept and importance of setting out of retaining/breast walls • Why and when of setting out of retaining/breast walls • Principle and procedure for setting out of retaining/breast walls • Performing setting out of retaining/breast walls • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
8.	Perform setting out of cross drainage structures	<p><u>Performing setting out of cross drainage structures:</u></p> <ul style="list-style-type: none"> • Concept and importance of setting out of cross drainage structures • Why and when of setting out of cross drainage structures • Principle and procedure for setting out of cross drainage structures • Performing setting out of cross drainage structures • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
9.	Perform setting out of bio engineering works	<p><u>Performing setting out of bio engineering works:</u></p> <ul style="list-style-type: none"> • Concept and importance of setting out of bio engineering works • Why and when of setting out of bio engineering works • Principle and procedure for setting out of bio engineering works • Performing setting out of bio engineering works • Precautions to be taken while 	0.6	2.4	3

		carrying out this task <ul style="list-style-type: none"> Keeping records of the activities related to this task 			
10.	Locate road centerline	<u>Locating road centerline:</u> <ul style="list-style-type: none"> Concept and importance of locating road centerline Why and when of locating road centerline Principle and procedure for locating road centerline Locating road centerline Precautions to be taken while carrying out this task Keeping records of the activities related to this task 	0.6	2.4	3
	Sub-total:		6	24	30
Module: 5: Supervising road construction					
Description: It deals with the knowledge and skills related to supervising earth, gravel, and metalled roads construction necessary for supervising local roads.					
Objectives:					
<ul style="list-style-type: none"> To supervise earth road construction To supervise gravel road construction To supervise metalled road construction 					
Sub-modules:					
<ol style="list-style-type: none"> Supervising earth road construction Supervising gravel road construction Supervising metalled road construction 					
Sub-module:1: Supervising earth road construction					
Description: It deals with the knowledge and skills related to the supervision of earth road construction.					
Objectives:					
Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.					
		36 hrs. = 6 hrs,(Th,) + 30 hrs,(Pr,)	Time (hours)		
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Perform site clearance	<u>Performing site clearance:</u> <ul style="list-style-type: none"> Concept and importance of performing site clearance Why and when of performing site clearance Principle and procedure for performing site clearance Performing site clearance 	0.5	2.5	3

		<ul style="list-style-type: none"> • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
2.	Supervise top soil removal work	<u>Supervising top soil removal work:</u> <ul style="list-style-type: none"> • Concept and importance of supervising top soil removal work • Why and when of supervising top soil removal work • Principle and procedure for supervising top soil removal work • Supervising top soil removal work • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.5	3
3.	Perform benching	<u>Performing benching:</u> <ul style="list-style-type: none"> • Concept and importance of performing benching • Why and when of performing benching • Principle and procedure for performing benching • Performing benching • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.5	3
4.	Maintain borrow pit	<u>Maintaining borrow pit:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining borrow pit • Why and when of maintaining borrow pit • Principle and procedure for maintaining borrow pit • Maintaining borrow pit • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.5	3
5.	Maintain fill/cut slopes	<u>Maintaining fill/cut slopes:</u>	0.5	2.5	3

		<ul style="list-style-type: none"> • Concept and importance of maintaining fill/cut slopes • Why and when of maintaining fill/cut slopes • Principle and procedure for maintaining fill/cut slopes • Maintaining fill/cut slopes • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
6.	Manage safe disposal of surplus materials	<u>Managing safe disposal of surplus materials:</u> <ul style="list-style-type: none"> • Concept and importance of managing safe disposal of surplus materials • Why and when of managing safe disposal of surplus materials • Principle and procedure for managing safe disposal of surplus materials • Managing safe disposal of surplus materials • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.5	3
7.	Maintain Formation width	<u>Maintaining Formation width:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining formation width • Why and when of maintaining formation width • Principle and procedure for maintaining formation width • Maintaining formation width • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.5	3
8.	Maintain camber/upper elevation (S.E.)	<u>Maintaining camber/upper elevation (S.E.):</u> <ul style="list-style-type: none"> • Concept and importance of 	0.5	2.5	3

		<p>maintaining camber/upper elevation (S.E.)</p> <ul style="list-style-type: none"> • Why and when of maintaining camber/upper elevation (S.E.) • Principle and procedure for maintaining camber/upper elevation (S.E.) • Maintaining camber/upper elevation (S.E.) • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
9.	Maintain longitudinal slope/grade	<p><u>Maintaining longitudinal slope/grade:</u></p> <ul style="list-style-type: none"> • Concept and importance of maintaining longitudinal slope/grade • Why and when of maintaining longitudinal slope/grade • Principle and procedure for maintaining longitudinal slope/grade • Maintaining longitudinal slope/grade • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.5	3
10.	Maintain vertical curves	<p><u>Maintaining vertical curves:</u></p> <ul style="list-style-type: none"> • Concept and importance of maintaining vertical curves • Why and when of maintaining vertical curves • Principle and procedure for maintaining vertical curves • Maintaining vertical curves • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.5	3
11.	Maintain horizontal curves	<p><u>Maintaining horizontal curves:</u></p> <ul style="list-style-type: none"> • Concept and importance of 	0.5	2.5	3

		maintaining horizontal curves <ul style="list-style-type: none"> • Why and when of maintaining horizontal curves • Principle and procedure for maintaining horizontal curves • Maintaining horizontal curves • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
12.	Maintain compaction density	<u>Maintaining compaction density:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining compaction density • Why and when of maintaining compaction density • Principle and procedure for maintaining compaction density • Maintaining compaction density • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.5	3
	Sub-total:		6	30	36
Sub-module:2: Supervising gravel road construction					
Description: It deals with the knowledge and skills related to the supervision of gravel road construction.					
Objectives: <ul style="list-style-type: none"> • To control traffic • To maintain gravel sizing • To maintain compaction • To maintain thickness • To maintain edging 					
Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.					
		15 hrs. = 3 hrs,(Th.) + 12 hrs,(Pr.)	Time (hours)		
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Control Traffic	<u>Controlling Traffic:</u> <ul style="list-style-type: none"> • Concept and importance of controlling traffic • Why and when of controlling traffic • Principle and procedure for controlling traffic • Controlling traffic 	0.6	2.4	3

		<ul style="list-style-type: none"> • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
2.	Maintain gravel sizing	<u>Maintaining gravel sizing:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining gravel sizing • Why and when of maintaining gravel sizing • Principle and procedure for maintaining gravel sizing • Maintaining gravel sizing • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
3.	Maintain compaction	<u>Maintaining compaction:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining compaction • Why and when of maintaining compaction • Principle and procedure for maintaining compaction • Maintaining compaction • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
4.	Maintain thickness	<u>Maintaining thickness:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining thickness • Why and when of maintaining thickness • Principle and procedure for maintaining thickness • Maintaining thickness • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
5.	Maintain edging	<u>Maintaining edging:</u>	0.6	2.4	3

		<ul style="list-style-type: none"> • Concept and importance of maintaining edging • Why and when of maintaining edging • Principle and procedure for maintaining edging • Maintaining edging • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
		Sub-total:	3	12	15
Sub-module:3: Supervising metalled road construction					
Description: It deals with the knowledge and skills related to the supervision of metalled road construction.					
Objectives: <ul style="list-style-type: none"> • To task statements • To maintain penetration macadam work. • To maintain ottaseal • To maintain asphalt concrete work • To maintain single surface treatment work • To maintain double surface treatment work • To maintain concrete pavement • To maintain sand seal • To maintain stone soling pavement 					
Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.					
		21 hrs. = 4 hrs,(Th,) + 17 hrs,(Pr,)	Time (hours)		
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Maintain penetration macadam work.	<u>Maintaining penetration macadam work:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining penetration macadam work • Why and when of maintaining penetration macadam work • Principle and procedure for maintaining penetration macadam work • Maintaining penetration macadam work • Precautions to be taken while carrying out this task 	0.5	2.0	2.5

		<ul style="list-style-type: none"> • Keeping records of the activities related to this task 			
2.	Maintain ottaseal	<u>Maintaining ottaseal:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining ottaseal • Why and when of maintaining ottaseal • Principle and procedure for maintaining ottaseal • Maintaining ottaseal • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.0	2.5
3.	Maintain asphalt concrete work	<u>Maintaining asphalt concrete work:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining asphalt concrete work • Why and when of maintaining asphalt concrete work • Principle and procedure for maintaining asphalt concrete work • Maintaining asphalt concrete work • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.0	2.5
4.	Maintain single surface treatment work	<u>Maintaining single surface treatment work:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining single surface treatment work • Why and when of maintaining single surface treatment work • Principle and procedure for maintaining single surface treatment work • Maintaining single surface treatment work • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.5	3.0

5.	Maintain double surface treatment work	<u>Maintaining double surface treatment work:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining double surface treatment work • Why and when of maintaining double surface treatment work • Principle and procedure for maintaining double surface treatment work • Maintaining double surface treatment work • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.5	3.0
6.	Maintain concrete pavement	<u>Maintaining concrete pavement:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining concrete pavement • Why and when of maintaining concrete pavement • Principle and procedure for maintaining concrete pavement • Maintaining concrete pavement • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.0	2.5
7.	Maintain sand seal	<u>Maintaining sand seal:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining sand seal • Why and when of maintaining sand seal • Principle and procedure for maintaining sand seal • Maintaining sand seal • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.0	2.5
8.	Maintain stone soling pavement	<u>Maintaining stone soling pavement:</u>	0.5	2.0	2.5

		<ul style="list-style-type: none"> • Concept and importance of maintaining stone soling pavement • Why and when of maintaining stone soling pavement • Principle and procedure for maintaining stone soling pavement • Maintaining stone soling pavement • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
	Sub-total:		4	17	21
Module: 6: Supervising wall, drainage and drain					
	Description: It deals with the knowledge and skills related to the supervision of wall, drainage and drain construction necessary for supervising local roads.				
	Objectives: <ul style="list-style-type: none"> • To supervise wall construction • To supervise cross drainage construction • To supervise roadside drain construction 				
	Sub-modules: <ol style="list-style-type: none"> 1. Supervising wall construction 2. Supervising cross drainage construction 3. Supervising roadside drain construction 				
Sub-module:1: Supervising wall construction					
	Description: It deals with the knowledge and skills related to the supervision of walls construction.				
	Objectives: <ul style="list-style-type: none"> • To layout walls • To maintain foundation excavation • To maintain soling work • To maintain foundation PCC/RCC work • To maintain construction joints • To maintain weep hole • To maintain filter materials • To maintain wall dimension • To maintain retaining walls • To maintain breast wall • To maintain toe wall • To maintain revetment wall • To maintain dry/masonry /composite walls • To maintain gabion wall/construction • To maintain gabion crate/box weaving 				

		Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.			
		45 hrs. = 9 hrs,(Th,) + 36 hrs,(Pr,)	Time (hours)		
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Layout walls	<u>Laying out walls:</u> <ul style="list-style-type: none"> • Concept and importance of laying out walls • Why and when of laying out walls • Principle and procedure for laying out walls • Laying out walls • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
2.	Maintain foundation excavation	<u>Maintaining foundation excavation:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining foundation excavation • Why and when of maintaining foundation excavation • Principle and procedure for maintaining foundation excavation • Maintaining foundation excavation • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
3.	Maintain soling work	<u>Maintaining soling work:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining soling work • Why and when of maintaining soling work • Principle and procedure for maintaining soling work • Maintaining soling work • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
4.	Maintain foundation PCC/RCC work	<u>Maintaining foundation PCC/RCC work:</u> <ul style="list-style-type: none"> • Concept and importance of 	0.6	2.4	3

		<p>maintaining foundation PCC/RCC work</p> <ul style="list-style-type: none"> • Why and when of maintaining foundation PCC/RCC work • Principle and procedure for maintaining foundation PCC/RCC work • Maintaining foundation PCC/RCC work • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
5.	Maintain Construction joints	<p><u>Maintaining Construction joints:</u></p> <ul style="list-style-type: none"> • Concept and importance of maintaining construction joints • Why and when of maintaining construction joints • Principle and procedure for maintaining construction joints • Maintaining Construction joints • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
6.	Maintain weep hole	<p><u>Maintaining weep hole :</u></p> <ul style="list-style-type: none"> • Concept and importance of maintaining weep hole • Why and when of maintaining weep hole • Principle and procedure for maintaining weep hole • Maintaining weep hole • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
7.	Maintain filter materials	<p><u>Maintaining filter materials:</u></p> <ul style="list-style-type: none"> • Concept and importance of maintaining filter materials • Why and when of maintaining filter materials 	0.6	2.4	3

		<ul style="list-style-type: none"> • Principle and procedure for maintaining filter materials • Maintaining filter materials • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
8.	Maintain wall dimension	<u>Maintaining wall dimension :</u> <ul style="list-style-type: none"> • Concept and importance of maintaining wall dimension • Why and when of maintaining wall dimension • Principle and procedure for maintaining wall dimension • Maintaining wall dimension • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
9.	Maintain retaining walls	<u>Maintaining retaining walls:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining retaining walls • Why and when of maintaining retaining walls • Principle and procedure for maintaining retaining walls • Maintaining retaining walls • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
10.	Maintain breast wall	<u>Maintaining breast wall:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining breast wall • Why and when of maintaining breast wall • Principle and procedure for maintaining breast wall • Maintaining breast wall • Precautions to be taken while carrying out this task 	0.6	2.4	3

		<ul style="list-style-type: none"> • Keeping records of the activities related to this task 			
11.	Maintain toe wall	<u>Maintaining toe wall:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining toe wall • Why and when of maintaining toe wall • Principle and procedure for maintaining toe wall • Maintaining toe wall • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
12.	Maintain revetment wall	<u>Maintaining revetment wall:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining revetment wall • Why and when of maintaining revetment wall • Principle and procedure for maintaining revetment wall • Maintaining revetment wall • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
13.	Maintain dry/masonry /composite walls	<u>Maintaining dry/masonry /composite walls:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining dry/masonry /composite walls • Why and when of maintaining dry/masonry /composite walls • Principle and procedure for maintaining dry/masonry /composite walls • Maintaining dry/masonry /composite walls • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3

14.	Maintain gabion wall/construction	<u>Maintaining gabion wall/construction:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining gabion wall/construction • Why and when of maintaining gabion wall/construction • Principle and procedure for maintaining gabion wall/construction • Maintaining gabion wall/construction • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
15.	Maintain gabion crate/box weaving	<u>Maintaining gabion crate/box weaving:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining gabion crate/box weaving • Why and when of maintaining gabion crate/box weaving • Principle and procedure for maintaining gabion crate/box weaving • Maintaining gabion crate/box weaving • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
	Sub-total:		9	36	45
Sub-module:2: Supervising cross drainage construction					
Description: It deals with the knowledge and skills related to the supervision of cross drainage construction necessary for supervising local roads.					
Objectives: <ul style="list-style-type: none"> • To assist for layout • To maintain foundation excavation • To manage dewatering /diversion of water • To maintain line/level of formwork • To inspect staging • To maintain line level of sub-structure • To maintain line level of super-structure 					

	<ul style="list-style-type: none"> To maintain line/level of formwork To maintain protection works 				
	Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.				
		27 hrs. = 5 hrs,(Th,) + 22 hrs,(Pr,)			
		Time (hours)			
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Assist for layout	<u>Assisting for layout:</u> <ul style="list-style-type: none"> Concept and importance of layout Why and when of layout Principle and procedure for layout Assisting for layout Precautions to be taken while carrying out this task Keeping records of the activities related to this task 	0.6	2.4	3.0
2.	Maintain foundation excavation	<u>Maintaining foundation excavation:</u> <ul style="list-style-type: none"> Concept and importance of maintaining foundation excavation Why and when of maintaining foundation excavation Principle and procedure for maintaining foundation excavation Maintaining foundation excavation Precautions to be taken while carrying out this task Keeping records of the activities related to this task 	0.6	2.4	3.0
3.	Manage dewatering /diversion of water	<u>Managing dewatering diversion of water:</u> <ul style="list-style-type: none"> Concept and importance of managing dewatering and diversion of water Why and when of managing dewatering and diversion of water Principle and procedure for managing dewatering and diversion of water Managing dewatering and diversion of water Precautions to be taken while carrying out this task Keeping records of the activities related to this task 	0.6	2.4	3.0

4.	Maintain line/level of formwork	<u>Maintaining line/level of formwork:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining line/level of formwork • Why and when of maintaining line/level of formwork • Principle and procedure for maintaining line/level of formwork • Maintaining line/level of formwork • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3.0
5.	Inspect staging	<u>Inspecting staging :</u> <ul style="list-style-type: none"> • Concept and importance of inspecting staging • Why and when of inspecting staging • Principle and procedure for inspecting staging • Inspecting staging • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3.0
6.	Maintain line level of sub-structure	<u>Maintaining line level of sub-structure:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining line level of sub-structure • Why and when of maintaining line level of sub-structure • Principle and procedure for maintaining line level of sub-structure • Maintaining line level of sub-structure • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.5	3.0
7.	Maintain line level of super-structure	<u>Maintaining line level of super-structure:</u> <ul style="list-style-type: none"> • Concept and importance of 	0.5	2.5	3.0

		<p>maintaining line level of super-structure</p> <ul style="list-style-type: none"> • Why and when of maintaining line level of super-structure • Principle and procedure for maintaining line level of super-structure • Maintaining line level of super-structure • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
8.	Maintain line/level of formwork	<p><u>Maintaining line/level of formwork:</u></p> <ul style="list-style-type: none"> • Concept and importance of maintaining line/level of formwork • Why and when of maintaining line/level of formwork • Principle and procedure for maintaining line/level of formwork • Maintaining line/level of formwork • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.5	3.0
9.	Maintain protection works	<p><u>Maintaining protection works:</u></p> <ul style="list-style-type: none"> • Concept and importance of maintaining protection works • Why and when of maintaining protection works • Principle and procedure for maintaining protection works • Maintaining protection works • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.5	3.0
	Sub-total:		5	22	27
Sub-module:3: Supervising roadside drain construction					
Description: It deals with the knowledge and skills related to the supervision of roadside drain construction necessary for supervising local roads.					
Objectives:					

	<ul style="list-style-type: none"> • To layout for roadside drain • To assure/monitor quality of concrete work • To maintain dimension of masonry work • To maintain dimensions/slopes • To supervise plastering • To supervise curving • To maintain surface/sub-surface drainage 				
	Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.				
		21 hrs. = 4 hrs,(Th,) + 17 hrs,(Pr,)			
		Time (hours)			
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Layout for roadside drain	Laying out for roadside drain:	0.5	2.4	2.9
2.	Assure/monitor quality of concrete work	<u>Assuring/monitoring quality of concrete work:</u> <ul style="list-style-type: none"> • Concept and importance of assuring/monitoring quality of concrete work • Why and when of assuring/monitoring quality of concrete work • Principle and procedure for assuring/monitoring quality of concrete work • Assuring/monitoring quality of concrete work • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.4	2.9
3.	Maintain dimension of masonry work	<u>Maintaining dimension of masonry work:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining dimension of masonry work • Why and when of maintaining dimension of masonry work • Principle and procedure for maintaining dimension of masonry work • Maintaining dimension of masonry work • Precautions to be taken while carrying out this task • Keeping records of the activities 	0.6	2.4	3.0

		related to this task			
4.	Maintain dimensions/slopes	<u>Maintaining dimensions/slopes:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining dimensions/slopes • Why and when of maintaining dimensions/slopes • Principle and procedure for maintaining dimensions/slopes • Maintaining dimensions/slopes • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3.0
5.	Supervise plastering	<u>Supervising plastering:</u> <ul style="list-style-type: none"> • Concept and importance of supervising plastering • Why and when of supervising plastering • Principle and procedure for supervising plastering • Supervising plastering • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3.0
6.	Supervise curving	<u>Supervising curving:</u> <ul style="list-style-type: none"> • Concept and importance of supervising curving • Why and when of supervising curving • Principle and procedure for supervising curving • Supervising curving • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.5	3.1
7.	Maintain surface/sub-surface drainage	<u>Maintaining surface/sub-surface drainage:</u> <ul style="list-style-type: none"> • Concept and importance of maintaining surface/sub-surface 	0.6	2.5	3.1

		drainage <ul style="list-style-type: none"> • Why and when of maintaining surface/sub-surface drainage • Principle and procedure for maintaining surface/sub-surface drainage • Maintaining surface/sub-surface drainage • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
		Sub-total:	4	17	21
Module: 7: Supervising bio-engineering works					
	Description: It deals with the knowledge and skills related to the supervision of bio-engineering works.				
	Objectives: <ul style="list-style-type: none"> • To supervise preparation of live stakes grass slips • To perform layout • To supervise plantation work • To supervise caring of plants • To protect plants 				
	Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.				
		10 hrs. = 2 hrs.(Th.) + 8 hrs.(Pr.)	Time (hours)		
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Supervise preparation of live stakes grass slips	<u>Supervising preparation of live stakes grass slips:</u> <ul style="list-style-type: none"> • Concept and importance of supervising preparation of live stakes grass slips • Why and when of supervising preparation of live stakes grass slips • Principle and procedure for supervising preparation of live stakes grass slips • Supervising preparation of live stakes grass slips • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.4	1.6	2
2.	Perform layout	<u>Performing layout:</u>	0.4	1.6	2

		<ul style="list-style-type: none"> • Concept and importance of layout • Why and when of layout • Principle and procedure for layout • Performing layout • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
3.	Supervise plantation work	<u>Supervising plantation work:</u> <ul style="list-style-type: none"> • Concept and importance of supervising plantation work • Why and when of supervising plantation work • Principle and procedure for supervising plantation work • Supervising plantation work • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.4	1.6	2
4.	Supervise caring of plants	<u>Supervising caring of plants:</u> <ul style="list-style-type: none"> • Concept and importance of caring of plants • Why and when of caring of plants • Principle and procedure for caring of plants • Supervising caring of plants • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.4	1.6	2
5.	Protect plants	<u>Protecting plants:</u> <ul style="list-style-type: none"> • Concept and importance of protecting plants • Why and when of protecting plants • Principle and procedure for protecting plants • Protecting plants • Precautions to be taken while carrying out this task • Keeping records of the activities 	0.4	1.6	2

		related to this task			
		Sub-total:	2	8	10
Module: 8: Road maintenance works					
	Description: It deals with the knowledge and skills related to road maintenance works necessary for supervising local roads.				
	Objectives: <ul style="list-style-type: none"> • To supervise routine maintenance • To supervise recurrent maintenance • To supervise periodic maintenance • To supervise emergency maintenance • To supervise rehabilitation maintenance 				
	Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.				
		15 hrs. = 3 hrs.(Th,) + 12 hrs.(Pr,)	Time (hours)		
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Supervise routine maintenance	<u>Supervising routine maintenance:</u> <ul style="list-style-type: none"> • Concept and importance of routine maintenance • Why and when of routine maintenance • Principle and procedure for routine maintenance • Supervising routine maintenance • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
2.	Supervise recurrent maintenance	<u>Supervising recurrent maintenance:</u> <ul style="list-style-type: none"> • Concept and importance of recurrent maintenance • Why and when of recurrent maintenance • Principle and procedure for recurrent maintenance • Supervising recurrent maintenance • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
3.	Supervise periodic maintenance	<u>Supervising periodic maintenance:</u> <ul style="list-style-type: none"> • Concept and importance of periodic maintenance 	0.6	2.4	3

		<ul style="list-style-type: none"> • Why and when of periodic maintenance • Principle and procedure for periodic maintenance • Supervising periodic maintenance • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
4.	Supervise emergency maintenance	<u>Supervising emergency maintenance:</u> <ul style="list-style-type: none"> • Concept and importance of emergency maintenance • Why and when of emergency maintenance • Principle and procedure for emergency maintenance • Supervising emergency maintenance • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
5.	Supervise rehabilitation maintenance	<u>Supervising rehabilitation maintenance:</u> <ul style="list-style-type: none"> • Concept and importance of rehabilitation maintenance • Why and when of rehabilitation maintenance • Principle and procedure for rehabilitation maintenance • Supervising rehabilitation maintenance • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.6	2.4	3
	Sub-total:		3	12	15
Module: 9: Management					
	Description: It deals with the knowledge and skills related to managing construction works, managing health/environment, communicating with others, maintaining records, growing professionally, and developing entrepreneurial skills necessary for supervising local roads.				
	Objectives: <ul style="list-style-type: none"> • To manage construction works • To manage health/environment 				

	<ul style="list-style-type: none"> To communicate with others To maintain records To grow professionally To develop entrepreneurial skills 				
	Sub-modules: <ol style="list-style-type: none"> Managing construction works Managing health/environment Communicating with others Maintaining records Growing professionally Developing entrepreneurial skills 				
Sub-module:1: Managing construction works					
	Description: It deals with the knowledge and skills related to managing construction works necessary for supervising local roads.				
	Objectives: <ul style="list-style-type: none"> To prepare/follow schedule To manage labor force/road building groups To manage materials To manage machine To manage money To manage minute/document 				
	Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.				
		18 hrs. = 3 hrs.(Th,) + 15 hrs.(Pr,)			
		Time (hours)			
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot
1.	Prepare/follow schedule	<u>Preparing/following schedule:</u> <ul style="list-style-type: none"> Concept and importance of preparing/following schedule Why and when of preparing/following schedule Principle and procedure for preparing/following schedule Preparing/following schedule Precautions to be taken while carrying out this task Keeping records of the activities related to this task 	0.5	2.5	3
2.	Manage labor force/road building groups	<u>Managing labor force/road building groups:</u> <ul style="list-style-type: none"> Concept and importance of managing labor force/road building groups Why and when of managing labor force/road building groups 	0.5	2.5	3

		<ul style="list-style-type: none"> • Principle and procedure for managing labor force/road building groups • Managing labor force/road building groups • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
3.	Manage materials	<u>Managing materials :</u> <ul style="list-style-type: none"> • Concept and importance of managing materials • Why and when of managing materials • Principle and procedure for managing materials • Managing materials • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.5	3
4.	Manage machine	<u>Managing machine:</u> <ul style="list-style-type: none"> • Concept and importance of managing machine • Why and when of managing machine • Principle and procedure for managing machine • Managing machine • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.5	2.5	3
5.	Manage money	<u>Managing money:</u> <ul style="list-style-type: none"> • Concept and importance of managing money • Why and when of managing money • Principle and procedure for managing money • Managing money • Precautions to be taken while carrying out this task 	0.5	2.5	3

		<ul style="list-style-type: none"> Keeping records of the activities related to this task 			
6.	Manage minute/document	<u>Managing minute/document:</u> <ul style="list-style-type: none"> Concept and importance of managing minute/document Why and when of managing minute/document Principle and procedure for managing minute/document Managing minute/document Precautions to be taken while carrying out this task Keeping records of the activities related to this task 	0.5	2.5	3
	Sub-total:		3	15	18
Sub-module:2: Managing health/environment					
Description: It deals with the knowledge and skills related to managing health /environment necessary for supervising local roads.					
Objectives: <ul style="list-style-type: none"> To maintain waste disposal system To manage safe/healthy drinking water To be familiar with communicable diseases To create safe working environment To be familiar with the management of hiv/std To minimize noise/dust pollution To enforce to manage quarry site To facilitate to dispose unwanted oil 					
Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.					
		36 hrs. = 6 hrs.(Th,) + 30 hrs.(Pr,)	Time (hours)		
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Maintain waste disposal system	<u>Maintaining waste disposal system :</u> <ul style="list-style-type: none"> Concept and importance of maintaining waste disposal system Why and when of maintaining waste disposal system Principle and procedure for maintaining waste disposal system Maintaining waste disposal system Precautions to be taken while carrying out this task Keeping records of the activities 	0.3	0.7	1

		related to this task			
2.	Manage safe/healthy drinking water	<u>Managing safe/healthy drinking water:</u> <ul style="list-style-type: none"> • Concept and importance of managing safe/healthy drinking water • Why and when of managing safe/healthy drinking water • Principle and procedure for managing safe/healthy drinking water • Managing safe/healthy drinking water • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.3	0.7	1
3.	Be familiar with communicable diseases	<u>Being familiar with communicable diseases:</u> <ul style="list-style-type: none"> • Concept and importance of being familiar with communicable diseases • Why and when of being familiar with communicable diseases • Principle and procedure for being familiar with communicable diseases • Being familiar with communicable • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.3	0.7	1
4.	Create safe working environment	<u>Creating safe working environment:</u> <ul style="list-style-type: none"> • Concept and importance of creating safe working environment • Why and when of creating safe working environment • Principle and procedure for creating safe working environment • Creating safe working environment • Precautions to be taken while carrying out this task • Keeping records of the activities 	0.3	0.7	1

		related to this task			
5.	Be familiar with the management of HIV/STD	<u>Being familiar with the management of HIV/STD:</u> <ul style="list-style-type: none"> • Concept and importance of being familiar with the management of HIV/STD • Why and when of being familiar with the management of HIV/STD • Principle and procedure for being familiar with the management of HIV/STD • Being familiar with the management of HIV/STD • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1
6.	Minimize noise/dust pollution	<u>Minimizing noise/dust pollution:</u> <ul style="list-style-type: none"> • Concept and importance of minimizing noise/dust pollution • Why and when of minimizing noise/dust pollution • Principle and procedure for minimizing noise/dust pollution • Minimizing noise/dust pollution • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1
7.	Enforce to manage quarry site	<u>Enforcing to manage quarry site:</u> <ul style="list-style-type: none"> • Concept and importance of enforcing to manage quarry site • Why and when of enforcing to manage quarry site • Principle and procedure for enforcing to manage quarry site • Enforcing to manage quarry site • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1

8.	Facilitate to dispose unwanted oil	<u>Facilitating to dispose unwanted oil :</u> <ul style="list-style-type: none"> • Concept and importance of facilitating to dispose unwanted oil • Why and when of facilitating to dispose unwanted oil • Principle and procedure for facilitating to dispose unwanted oil • Facilitating to dispose unwanted oil • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1
	Sub-total:		2	6	8
Sub-module:3: Communicating with others					
Description: It deals with the knowledge and skills related to communicating with others necessary for supervising local roads.					
Objectives: <ul style="list-style-type: none"> • To make telephone calls • To receive telephone calls • To write letters • To write simple reports • To communicate with seniors • To communicate with juniors/labors • To communicate with peers • To communicate with contractors • To communicate with users' committee • To communicate with user's group 					
Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.					
		10 hrs. = 2 hrs.(Th,) + 8 hrs.(Pr.)	Time (hours)		
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Make telephone calls	<u>Making telephone calls:</u> <ul style="list-style-type: none"> • Concept and importance of making telephone calls • Why and when of making telephone calls • Principle and procedure for making telephone calls • Making telephone calls • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1

2.	Receive telephone calls	<u>Receiving telephone calls:</u> <ul style="list-style-type: none"> • Concept and importance of receiving telephone calls • Why and when of receiving telephone calls • Principle and procedure for receiving telephone calls • Receiving telephone calls • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1
3.	Write letters	<u>Writing letters:</u> <ul style="list-style-type: none"> • Concept and importance of writing letters • Why and when of writing letters • Principle and procedure for writing letters • Writing letters • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1
4.	Write simple reports	<u>Writing simple reports:</u> <ul style="list-style-type: none"> • Concept and importance of writing simple reports • Why and when of writing simple reports • Principle and procedure for writing simple reports • Writing simple reports • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1
5.	Communicate with seniors	<u>Communicating with seniors:</u> <ul style="list-style-type: none"> • Concept and importance of communicating with seniors • Why and when of communicating with seniors • Principle and procedure for 	0.2	0.8	1

		<p>communicating with seniors</p> <ul style="list-style-type: none"> • Communicating with seniors • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
6.	Communicate with juniors/labors	<p><u>Communicating with juniors/labors:</u></p> <ul style="list-style-type: none"> • Concept and importance of communicating with juniors/labors • Why and when of communicating with juniors/labors • Principle and procedure for communicating with juniors/labors • Communicating with juniors/labors • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1
7.	Communicate with peers	<p><u>Communicating with peers:</u></p> <ul style="list-style-type: none"> • Concept and importance of communicating with peers • Why and when of communicating with peers • Principle and procedure for communicating with peers • Communicating with peers • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1
8.	Communicate with contractors	<p><u>Communicating with contractors:</u></p> <ul style="list-style-type: none"> • Concept and importance of communicating with contractors • Why and when of communicating with contractors • Principle and procedure for communicating with contractors • Communicating with contractors • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1

9.	Communicate with users' committee	<u>Communicating with users' committee:</u> <ul style="list-style-type: none"> • Concept and importance of communicating with users' committee • Why and when of communicating with users' committee • Principle and procedure for communicating with users' committee • Communicating with users' committee • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1
10.	Communicate with user's group	<u>Communicating with user's group:</u> <ul style="list-style-type: none"> • Concept and importance of communicating with user's group • Why and when of communicating with user's group • Principle and procedure for communicating with user's group • Communicating with user's group • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1
	Sub-total:		2	8	10
Sub-module:4: Maintaining records					
	Description: It deals with the knowledge and skills related to maintaining necessary for supervising local roads				
	Objectives: <ul style="list-style-type: none"> • To keep records of attendance • To maintain muster roll • To keep records of tools/equipment/materials used • To maintain log book • To maintain simple a/c books • To identify/facilitate to apply various formats of records • To maintain records of applied fire safety measures • To maintain daily diary • To keep records of work progress 				

	<ul style="list-style-type: none"> To prepare work progress records To submit records/reports to the concerned 				
	Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.				
		11 hrs. = 2 hrs.(Th,) + 9 hrs.(Pr.)			
		Time (hours)			
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Keep records of attendance	<u>Keeping records of attendance:</u> <ul style="list-style-type: none"> Concept and importance of keeping records of attendance Why and when of keeping records of attendance Principle and procedure for keeping records of attendance Keeping records of attendance Precautions to be taken while carrying out this task Keeping records of the activities related to this task 	0.2	0.9	1.1
2.	Maintain muster roll	<u>Maintaining muster roll:</u> <ul style="list-style-type: none"> Concept and importance of maintaining muster roll Why and when of maintaining muster roll Principle and procedure for maintaining muster roll Maintaining muster roll Precautions to be taken while carrying out this task Keeping records of the activities related to this task 	0.2	0.9	1.1
3.	Keep records of tools/equipment/materials used	<u>Keeping records of tools/equipment/materials used:</u> <ul style="list-style-type: none"> Concept and importance of keeping records of tools/equipment/materials used Why and when of keeping records of tools/equipment/materials used Principle and procedure for keeping records of tools/equipment/materials used Keeping records of tools/equipment/materials used Precautions to be taken while 	0.2	0.8	1.0

		<p>carrying out this task</p> <ul style="list-style-type: none"> • Keeping records of the activities related to this task 			
4.	Maintain log book	<p><u>Maintaining log book:</u></p> <ul style="list-style-type: none"> • Concept and importance of maintaining log book • Why and when of maintaining log book • Principle and procedure for maintaining log book • Maintaining log book • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1.0
5.	Maintain simple A/C books	<p><u>Maintaining simple A/C books:</u></p> <ul style="list-style-type: none"> • Concept and importance of maintaining simple A/C books • Why and when of maintaining simple A/C books • Principle and procedure for maintaining simple A/C books • Maintaining simple A/C books • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1.0
6.	Identify/facilitate to apply various formats of records	<p><u>Identifying/facilitating to apply various formats of records:</u></p> <ul style="list-style-type: none"> • Concept and importance of identifying/facilitating to apply various formats of records • Why and when of identifying/facilitating to apply various formats of records • Principle and procedure for identifying/facilitating to apply various formats of records • Identifying/facilitating to apply various formats of records • Precautions to be taken while carrying out this task 	0.2	0.8	1.0

		<ul style="list-style-type: none"> • Keeping records of the activities related to this task 			
7.	Maintain records of applied fire safety measures	<p><u>Maintaining records of applied fire safety measures:</u></p> <ul style="list-style-type: none"> • Concept and importance of maintaining records of applied fire safety measures • Why and when of maintaining records of applied fire safety measures • Principle and procedure for maintaining records of applied fire safety measures • Maintaining records of applied fire safety measures • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1.0
8.	Maintain daily diary	<p><u>Maintaining daily diary:</u></p> <ul style="list-style-type: none"> • Concept and importance of maintaining daily diary • Why and when of maintaining daily diary • Principle and procedure for maintaining daily diary • Maintaining daily diary • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1.0
9.	Keep records of work progress	<p><u>Keeping records of work progress:</u></p> <ul style="list-style-type: none"> • Concept and importance of keeping records of work progress • Why and when of keeping records of work progress • Principle and procedure for keeping records of work progress • Keeping records of work progress • Precautions to be taken while carrying out this task • Keeping records of the activities 	0.2	0.8	1.0

		related to this task			
10.	Prepare work progress records	<u>Preparing work progress records:</u> <ul style="list-style-type: none"> • Concept and importance of preparing work progress records • Why and when of preparing work progress records • Principle and procedure for preparing work progress records • Preparing work progress records • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.1	0.8	0.9
11.	Submit records/reports to the concerned	<u>Submitting records/reports to the concerned:</u> <ul style="list-style-type: none"> • Concept and importance of submitting records/reports to the concerned • Why and when of submitting records/reports to the concerned • Principle and procedure for submitting records/reports to the concerned • Submitting records/reports to the concerned • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.1	0.8	0.9
	Sub-total:		2	9	11
Sub-module:5: Growing professionally					
Description: It deals with the knowledge and skills related to growing professionally necessary for supervising local roads.					
Objectives:					
<ul style="list-style-type: none"> • To attend meetings/ seminars/work shops • To consult experts • To consult professional books/manuals/literature • To participate in professional organizations • To follow professional rules/regulations/ethics • To consult professional journals/magazine • To discuss with peers • To attend professional trainings 					

	<ul style="list-style-type: none"> To seek/attend for higher education To browse www 				
	Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.				
		10 hrs. = 2 hrs.(Th.) + 8 hrs.(Pr.)			
		Time (hours)			
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Attend meetings/ seminars/work shops	<u>Attending meetings/ seminars/work shops:</u> <ul style="list-style-type: none"> Concept and importance of attending meetings/ seminars/work shops Why and when of attending meetings/ seminars/work shops Principle and procedure for attending meetings/ seminars/work shops Attending meetings/ seminars/work shops Precautions to be taken while carrying out this task Keeping records of the activities related to this task 	0.2	0.8	1
2.	Consult experts	<u>Consulting with experts:</u> <ul style="list-style-type: none"> Concept and importance of consulting with experts Why and when of consulting with experts Principle and procedure for consulting with experts Consulting with experts Precautions to be taken while carrying out this task Keeping records of the activities related to this task 	0.2	0.8	1
3.	Consult professional books/manuals/literature	<u>Consulting professional books/manuals/literature:</u> <ul style="list-style-type: none"> Concept and importance of consulting professional books/manuals/literature Why and when of consulting professional books/manuals/literature Principle and procedure for 	0.2	0.8	1

		<p>consulting professional books/manuals/literature</p> <ul style="list-style-type: none"> • Consulting professional books/manuals/literature • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
4.	Participate in professional organizations	<p><u>Participating in professional organizations:</u></p> <ul style="list-style-type: none"> • Concept and importance of participating in professional organizations • Why and when of participating in professional organizations • Principle and procedure for participating in professional organizations • Participating in professional organizations • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1
5.	Follow professional rules/regulations/ethics	<p><u>Following professional rules/regulations/ethics:</u></p> <ul style="list-style-type: none"> • Concept and importance of following professional rules/regulations/ethics • Why and when of following professional rules/regulations/ethics • Principle and procedure for following professional rules/regulations/ethics • Following professional rules/regulations/ethics • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1
6.	Consult professional	<u>Consulting professional</u>	0.2	0.8	1

	journals/magazine	<u>journals/magazine:</u> <ul style="list-style-type: none"> • Concept and importance of consulting professional journals/magazine • Why and when of consulting professional journals/magazine • Principle and procedure for consulting professional journals/magazine • Consulting professional journals/magazine • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
7.	Discuss with peers	<u>Discussing with peers:</u> <ul style="list-style-type: none"> • Concept and importance of discussing with peers • Why and when of discussing with peers • Principle and procedure for discussing with peers • Discussing with peers • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1
8.	Attend professional trainings	<u>Attending professional trainings:</u> <ul style="list-style-type: none"> • Concept and importance of attending professional trainings • Why and when of attending professional trainings • Principle and procedure for attending professional trainings • Attending professional trainings • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1
9.	Seek/attend for higher education	<u>Seeking/attending for higher education:</u> <ul style="list-style-type: none"> • Concept and importance of seeking/attending for higher 	0.2	0.8	1

		<p>education</p> <ul style="list-style-type: none"> • Why and when of seeking/attending for higher education • Principle and procedure for seeking/attending for higher education • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
10.	Browse www	<p><u>Browsing www:</u></p> <ul style="list-style-type: none"> • Concept and importance of browsing www • Why and when of • Principle and procedure for • Browsing www • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.2	0.8	1
	Sub-total:		2	8	10
Sub-module:6: Developing entrepreneurial skills					
Description: It deals with the knowledge and skills related to developing entrepreneurial skills necessary for supervising local roads.					
Objectives:					
<ul style="list-style-type: none"> • To develop small business planning skills • To develop small business organizing skills • To develop small business direction skills • To develop small business controlling skills • To prepare a small business plan • To prepare a budget for a small business 					
Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.					
		12 hrs. = 2 hrs.(Th.) + 10 hrs.(Pr.)	Time (hours)		
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Develop small business planning skills	<p><u>Developing small business planning skills:</u></p> <ul style="list-style-type: none"> • Concept and importance of developing small business planning skills • Why and when of developing small business planning skills 	0.4	1.6	2.0

		<ul style="list-style-type: none"> • Principle and procedure for developing small business planning skills • Developing small business planning skills • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
2.	Develop small business organizing skills	<u>Developing small business organizing skills:</u> <ul style="list-style-type: none"> • Concept and importance of developing small business organizing skills • Why and when of developing small business organizing skills • Principle and procedure for developing small business organizing skills • Developing small business organizing skills • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.4	1.6	2.0
3.	Develop small business direction skills	<u>Developing small business direction skills:</u> <ul style="list-style-type: none"> • Concept and importance of developing small business direction skills • Why and when of developing small business direction skills • Principle and procedure for developing small business direction skills • Developing small business direction skills • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.3	1.6	1.9
4.	Develop small business controlling	<u>Developing small business controlling</u>	0.3	1.6	1.9

	skills	<u>skills:</u> <ul style="list-style-type: none"> • Concept and importance of developing small business controlling skills • Why and when of developing small business controlling skills • Principle and procedure for developing small business controlling skills • Developing small business controlling skills • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
5.	Prepare a small business plan	<u>Preparing a small business plan:</u> <ul style="list-style-type: none"> • Concept and importance of preparing a small business plan • Why and when of preparing a small business plan • Principle and procedure for preparing a small business plan • Preparing a small business plan • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.3	2.0	2.3
6.	Prepare a budget for a small business	<u>Preparing a budget for a small business:</u> <ul style="list-style-type: none"> • Concept and importance of preparing a budget for a small business • Why and when of preparing a budget for a small business • Principle and procedure for preparing a budget for a small business • Preparing a budget for a small business • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	0.3	1.6	1.9

	Sub-total:		2	10	12
Module: 10: Social mobilization					
	Description: It deals with the knowledge and skills related to social mobilization necessary for supervising local roads.				
	Objectives: <ul style="list-style-type: none"> • To facilitate to form users committee • To prepare participation schedule • To facilitate to form users' group • To facilitate to minute decisions • To facilitate users' committee meetings • To motivate users for participation • To facilitate to carry out public audit • To facilitate to minimize conflict 				
	Tasks: Each task consists of related technical knowledge and time allocation for both the theoretical and practical aspects of it.				
		16 hrs. = 8 hrs.(Th,) + 8 hrs.(Pr.)	Time (hours)		
SN	Task statements	Related technical knowledge	Th.	Pr.	Tot.
1.	Facilitate to form users committee	<u>Facilitating to form users committee:</u> <ul style="list-style-type: none"> • Concept and importance of facilitating to form users committee • Why and when of facilitating to form users committee • Principle and procedure for facilitating to form users committee • Facilitating to form users committee • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	1	1	2
2.	Prepare participation schedule	<u>Preparing participation schedule:</u> <ul style="list-style-type: none"> • Concept and importance of preparing participation schedule • Why and when of preparing participation schedule • Principle and procedure for preparing participation schedule • Preparing participation schedule • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	1	1	2
3.	Facilitate to form users' group	<u>Facilitating to form users' group:</u>	1	1	2

		<ul style="list-style-type: none"> • Concept and importance of facilitating to form users' group • Why and when of facilitating to form users' group • Principle and procedure for facilitating to form users' group • Facilitating to form users' group • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
4.	Facilitate to minute decisions	<u>Facilitating to minute decisions:</u> <ul style="list-style-type: none"> • Concept and importance of facilitating to minute decisions • Why and when of facilitating to minute decisions • Principle and procedure for facilitating to minute decisions • Facilitating to minute decisions • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	1	1	2
5.	Facilitate users' committee meetings	<u>Facilitating users' committee meetings:</u> <ul style="list-style-type: none"> • Concept and importance of facilitating users' committee meetings • Why and when of facilitating users' committee meetings • Principle and procedure for facilitating users' committee meetings • Facilitating users' committee meetings • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	1	1	2
6.	Motivate users for participation	<u>Motivating users for participation:</u> <ul style="list-style-type: none"> • Concept and importance of motivating users for participation • Why and when of motivating users 	1	1	2

		<p>for participation</p> <ul style="list-style-type: none"> • Principle and procedure for motivating users for participation • Motivating users for participation • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 			
7.	Facilitate to carry out public audit	<p><u>Facilitating to carry out public audit:</u></p> <ul style="list-style-type: none"> • Concept and importance of facilitating to carry out public audit • Why and when of facilitating to carry out public audit • Principle and procedure for facilitating to carry out public audit • Facilitating to carry out public audit • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	1	1	2
8.	Facilitate to minimize conflict	<p><u>Facilitating to minimize conflict:</u></p> <ul style="list-style-type: none"> • Concept and importance of facilitating to minimize conflict • Why and when of facilitating to minimize conflict • Principle and procedure for facilitating to minimize conflict • Facilitating to minimize conflict • Precautions to be taken while carrying out this task • Keeping records of the activities related to this task 	1	1	2
	Sub-total:		8	8	16
	All total:		81	309	390

Appendices

Modules, sub-modules, tasks and time allocation

Modules	Sub-modules	SN	Tasks	Time (hours)		
				Th.	Pr.	Tot.
1. Tools, materials, equipment, and safety	1. Tools, materials and equipment	12.	Handle measuring tape	0.2	0.9	1.1
		13.	Handle pedometer	0.2	0.9	1.1
		14.	Handle altimeter	0.2	0.8	1.0
		15.	Handle pipe/sprit level	0.2	0.8	1.0
		16.	Handle surveyor compass	0.2	0.8	1.0
		17.	Handle Abney level	0.2	0.8	1.0
		18.	Handle auto level	0.2	0.8	1.0
		19.	Handle calculator	0.2	0.8	1.0
		20.	Operate computer	0.2	0.8	1.0
		21.	Apply global positioning system	0.1	0.8	0.9
		22.	Handle wheel barrow	0.1	0.8	0.9
			Sub-total:	2	9	11
		11				
	2. Enforcing safety rules	8.	Maintain first aid kit box	0.4	0.5	0.9
		9.	Perform simple/common first aids	0.6	1.0	1.6
		10.	Enforce safety wares	0.4	0.5	0.9
		11.	Maintain accidental records	0.4	0.5	0.9
		12.	Orient/inform about possible risks/hazards	0.4	0.5	0.9
		13.	Enforce to follow traffic signals	0.4	0.5	0.9
		14.	Apply fire safety measures	0.4	0.5	0.9
			Sub-total:	3	4	7
		7				
2. Field survey		3.	Assist to fix Road Alignment	0.6	2.4	3
		4.	Assist to fix Road Centre line	0.6	2.4	3
		5.	Measure tentative Road Length	0.6	2.4	3
		6.	Assist to Conduct L-section Survey	0.6	2.4	3
		7.	Assist to conduct cross-section Survey	0.6	2.4	3
		8.	Assist to fix Reference Points	0.6	2.4	3
		9.	Fix Bench mark	0.6	2.4	3

		10.	Assist to investigate obligatory points	0.6	2.4	3
		11.	Assist to conduct Traverse Survey	0.6	2.4	3
		12.	Conduct Labor Availability Survey	0.6	2.4	3
		13.	Conduct Local Construction Materials Survey	0.6	2.4	3
		14.	Assist to conduct Household Survey	0.6	2.4	3
		15.	Assist to perform cadastral Survey	0.6	2.4	3
		16.	Perform Traffic/vehicle count	0.6	2.4	3
		17.	Count trees/cross-drainage hard rock	0.6	2.4	3
			Sub-total:	9	36	45
			15			
3. Calculations and drawings	1. Calculations/estimations	7.	Calculate area/volume of various geometrical figures	0.5	1.0	1.5
		8.	Use government norms/rates	0.3	1.0	1.3
		9.	Read/interpret specifications	0.3	1.0	1.3
		10.	Estimate/cost materials	0.3	1.0	1.3
		11.	Estimate/cost equipment/tools	0.3	1.0	1.3
		12.	Estimate human resources	0.3	1.0	1.3
			Sub-total:	2	6	8
			6			
	2. Drawings /sketches	8.	Prepare drawing/sketch of Rectangular section	0.3	1.7	2.0
		9.	Prepare sketch/drawing of Trapezoidal section	0.3	1.7	2.0
		10.	Read/Interpret plan of road alignment	0.2	1.7	1.9
		11.	Read/Interpret section of road alignment	0.3	1.7	2.0
		12.	Read/Interpret deviation of geometrical figures	0.3	1.7	2.0
		13.	Prepare sketch/drawings of triangular section	0.3	1.7	2.0
		14.	Prepare sketches/drawings of circular section	0.3	1.8	2.1
			Sub-total:	2	12	14

			7				
4. Setting out/layout		11.	Prepare check list		0.6	2.4	3
		12.	Collect/Identify tools/equipment/materials		0.6	2.4	3
		13.	Perform Measurements		0.6	2.4	3
		14.	Apply 3-4-5 method of layout		0.6	2.4	3
		15.	Perform setting out of centerline (road alignment)		0.6	2.4	3
		16.	Perform setting out of formation width		0.6	2.4	3
		17.	Perform setting out of retaining/breast walls		0.6	2.4	3
		18.	Perform setting out of cross drainage structures		0.6	2.4	3
		19.	Perform setting out of bio engineering works		0.6	2.4	3
		20.	Locate road centerline		0.6	2.4	3
			Sub-total:	6	24	30	
			10				
5. Supervising road construction	1. Supervising earth road construction	13.	Perform site clearance		0.5	2.5	3
		14.	Supervise top soil removal work		0.5	2.5	3
		15.	Perform benching		0.5	2.5	3
		16.	Maintain borrow pit		0.5	2.5	3
		17.	Maintain fill/cut slopes		0.5	2.5	3
		18.	Manage safe disposal of surplus materials		0.5	2.5	3
		19.	Maintain Formation width		0.5	2.5	3
		20.	Maintain camber/upper elevation (S.E.)		0.5	2.5	3
		21.	Maintain longitudinal slope/grade		0.5	2.5	3
		22.	Maintain vertical curves		0.5	2.5	3
		23.	Maintain horizontal curves		0.5	2.5	3
		24.	Maintain compaction density		0.5	2.5	3
					Sub-total:	6	30
			12				
	2. Supervising gravel road construction	6.	Control Traffic		0.6	2.4	3
		7.	Maintain gravel sizing		0.6	2.4	3
		8.	Maintain compaction		0.6	2.4	3
		9.	Maintain thickness		0.6	2.4	3
		10.	Maintain edging		0.6	2.4	3
			Sub-total:	3	12	15	
			5				

	3. Supervising metalled road construction	9.	Maintain penetration macadam work.	0.5	2.0	2.5
		10.	Maintain ottaseal	0.5	2.0	2.5
		11.	Maintain asphalt concrete work	0.5	2.0	2.5
		12.	Maintain single surface treatment work	0.5	2.5	3.0
		13.	Maintain double surface treatment work	0.5	2.5	3.0
		14.	Maintain concrete pavement	0.5	2.0	2.5
		15.	Maintain stone soling pavement	0.5	2.0	2.5
			Sub-total:	4	17	21
			7			
6. Supervising wall, drainage and drain	1. Supervising wall construction	16.	Layout walls	0.6	2.4	3
		17.	Maintain foundation excavation	0.6	2.4	3
		18.	Maintain soling work	0.6	2.4	3
		19.	Maintain foundation PCC/RCC work	0.6	2.4	3
		20.	Maintain Construction joints	0.6	2.4	3
		21.	Maintain weep hole	0.6	2.4	3
		22.	Maintain filter materials	0.6	2.4	3
		23.	Maintain wall dimension	0.6	2.4	3
		24.	Maintain retaining walls	0.6	2.4	3
		25.	Maintain breast wall	0.6	2.4	3
		26.	Maintain toe wall	0.6	2.4	3
		27.	Maintain revetment wall	0.6	2.4	3
		28.	Maintain dry/masonry /composite walls	0.6	2.4	3
		29.	Maintain gabion wall/construction	0.6	2.4	3
		30.	Maintain gabion crate/box weaving	0.6	2.4	3
			Sub-total:	9	36	45
			15			
	2. Supervising cross drainage construction	10.	Assist for layout	0.6	2.4	3.0
		11.	Maintain foundation excavation	0.6	2.4	3.0
		12.	Manage dewatering diversion	0.6	2.4	3.0
		13.	Maintain line/level of formwork	0.6	2.4	3.0
		14.	Inspect staging	0.6	2.4	3.0

		15.	Maintain line level of sub-structure	0.5	2.5	3.0
		16.	Maintain line level of super-structure	0.5	2.5	3.0
		17.	Maintain line/level of formwork	0.5	2.5	3.0
		18.	Maintain protection works	0.5	2.5	3.0
			Sub-total:	5	22	27
			9			
	3. Supervising roadside drain construction	8.	Layout for roadside drain	0.5	2.4	2.9
		9.	Assure/monitor quality of concrete work	0.5	2.4	2.9
		10.	Maintain dimension of masonry work	0.6	2.4	3.0
		11.	Maintain dimensions/slopes	0.6	2.4	3.0
		12.	Supervise plastering	0.6	2.4	3.0
		13.	Supervise curving	0.6	2.5	3.1
		14.	Maintain surface/sub-surface drainage	0.6	2.5	3.1
			Sub-total:	4	17	21
			7			
7. Supervising bio-engineering works		6.	Supervise preparation of live stakes grass slips	0.4	1.6	2
		7.	Perform layout	0.4	1.6	2
		8.	Supervise plantation work	0.4	1.6	2
		9.	Supervise caring of plants	0.4	1.6	2
		10.	Protect plants	0.4	1.6	2
			Sub-total:	2	8	10
			5			
8. Road maintenance works		7.	Supervise routine maintenance	0.6	2.4	3
		8.	Supervise recurrent maintenance	0.6	2.4	3
		9.	Supervise periodic maintenance	0.6	2.4	3
		10.	Supervise emergency maintenance	0.6	2.4	3
		11.	Supervise rehabilitation maintenance	0.6	2.4	3
			Sub-total:	3	12	15
			5			
9. Management	1. Managing construction works	7.	Prepare/follow schedule	0.5	2.5	3
		8.	Manage labor force/road building groups	0.5	2.5	3
		9.	Manage materials	0.5	2.5	3

		10.	Manage machine		0.5	2.5	3
		11.	Manage money		0.5	2.5	3
		12.	Manage minute/document		0.5	2.5	3
			Sub-total:		3	15	18
			6				
	2. Managing health/environment	9.	Maintain waste disposal system		0.3	0.7	1
		10.	Manage safe/healthy drinking water		0.3	0.7	1
		11.	Be familiar with communicable diseases		0.3	0.7	1
		12.	Create safe working environment		0.3	0.7	1
		13.	Be familiar with the management of HIV/STD		0.2	0.8	1
		14.	Minimize noise/dust pollution		0.2	0.8	1
		15.	Enforce to manage quarry site		0.2	0.8	1
		16.	Facilitate to dispose unwanted oil		0.2	0.8	1
			Sub-total:		2	6	8
			8				
	3. Communicating with others	11.	Make telephone calls		0.2	0.8	1
		12.	Receive telephone calls		0.2	0.8	1
		13.	Write letters		0.2	0.8	1
		14.	Write simple reports		0.2	0.8	1
		15.	Communicate with seniors		0.2	0.8	1
		16.	Communicate with juniors/labors		0.2	0.8	1
		17.	Communicate with peers		0.2	0.8	1
		18.	Communicate with contractors		0.2	0.8	1
		19.	Communicate with users' committee		0.2	0.8	1
		20.	Communicate with user's group		0.2	0.8	1
			Sub-total:		2	8	10
			10				
	4. Maintaining records	12.	Keep records of attendance		0.2	0.9	1.1
		13.	Maintain muster roll		0.2	0.9	1.1
		14.	Keep records of tools/equipment/materials used		0.2	0.8	1.0
		15.	Maintain log book		0.2	0.8	1.0

		16.	Maintain simple A/C books	0.2	0.8	1.0
		17.	Identify/facilitate to apply various formats of records	0.2	0.8	1.0
		18.	Maintain records of applied fire safety measures	0.2	0.8	1.0
		19.	Maintain daily diary	0.2	0.8	1.0
		20.	Keep records of work progress	0.2	0.8	1.0
		21.	Prepare work progress records	0.1	0.8	0.9
		22.	Submit records/reports to the concerned	0.1	0.8	0.9
			Sub-total:	2	9	11
			11			
	5. Growing professionally	11.	Attend meetings/ seminars/work shops	0.2	0.8	1
		12.	Consult experts	0.2	0.8	1
		13.	Consult professional books/manuals	0.2	0.8	1
		14.	Participate in professional organizations	0.2	0.8	1
		15.	Follow professional rules/regulations/ethics	0.2	0.8	1
		16.	Consult professional journals/magazine	0.2	0.8	1
		17.	Discuss with peers	0.2	0.8	1
		18.	Attend professional trainings	0.2	0.8	1
		19.	Seek/attend for higher education	0.2	0.8	1
		20.	Browse www	0.2	0.8	1
			Sub-total:	2	8	10
			10			
	6. Developing entrepreneurial skills	7.	Develop small business planning skills	0.4	1.6	2.0
		8.	Develop small business organizing skills	0.4	1.6	2.0
		9.	Develop small business direction skills	0.3	1.6	1.9
		10.	Develop small business controlling skills	0.3	1.6	1.9
		11.	Prepare a small business plan	0.3	2.0	2.3
		12.	Prepare a budget for a	0.3	1.6	1.9

			small business			
			Sub-total:		2	9.6
			6			
10. Social mobilization		9.	Facilitate to form users committee		1	1
		10.	Prepare participation schedule		1	1
		11.	Facilitate to form users' group		1	1
		12.	Facilitate to minute decisions		1	1
		13.	Facilitate users' committee meetings		1	1
		14.	Motivate users for participation		1	1
		15.	Facilitate to carry out public audit		1	1
		16.	Facilitate to minimize conflict		1	1
			Sub-total:		8	8
			8			
			All total:		81	309
			180			

List of duties and tasks: a product of job analysis

Duty: A: Assist for Field Survey

Tasks:

1. Assist to fix Road Alignment
2. Assist to fix Road Centre line
3. Measure tentative Road Length
4. Assist to Conduct L-section Survey
5. Assist to conduct cross-section Survey
6. Assist to fix Reference Points
7. Fix Bench mark
8. Assist to investigate obligatory points
9. Assist to conduct Traverse Survey
10. Conduct Labor Availability Survey
11. Conduct Local Construction Materials Survey
12. Assist to conduct Household Survey
13. Assist to perform cadastral Survey
14. Perform Traffic/vehicle count
15. Count trees/cross-drainage hard rock

Duty: B: Perform Simple Calculations/Estimations

Tasks:

16. Calculate area/volume of various geometrical figures
17. Use government norms/rates
18. Read/interpret specifications
19. Estimate/cost materials
20. Estimate/cost equipment/tools
21. Estimate human resources

Duty: C: Read/Interpret/ prepare drawings /sketches

Tasks:

22. Prepare drawing/sketch of Rectangular section
23. Prepare sketch/drawing of Trapezoidal section
24. Read/Interpret plan of road alignment
25. Read/Interpret section of road alignment
26. Read/Interpret deviation of geometrical figures
27. Prepare sketch/drawings of triangular section
28. Prepare sketches/drawings of circular section

Duty: D: Facilitate for Social Mobilization

Tasks:

29. Facilitate to form users committee
30. Prepare participation schedule
31. Facilitate to form users' group
32. Facilitate to minute decisions
33. Facilitate users' committee meetings
34. Motivate users for participation
35. Facilitate to carry out public audit
36. Facilitate to minimize conflict

Duty: E: Perform setting out/Layout

Tasks:

37. Prepare check list
38. Collect/Identify tools/equipment/materials
39. Perform Measurements
40. Apply 3-4-5 method of layout
41. Perform setting out of centerline (road alignment)
42. Perform setting out of formation width
43. Perform setting out of retaining/breast walls
44. Perform setting out of cross drainage structures
45. Perform setting out of bio engineering works
46. Locate road centerline

Duty: F: Supervise Earth Road Construction

Tasks:

47. Perform site clearance
48. Supervise top soil removal work
49. Perform benching
50. Maintain borrow pit
51. Maintain fill/cut slopes
52. Manage safe disposal of surplus materials
53. Maintain Formation width
54. Maintain camber/upper elevation (S.E.)
55. Maintain longitudinal slope/grade
56. Maintain vertical curves
57. Maintain horizontal curves
58. Maintain compaction density

Duty: G: Supervise wall Construction

Tasks:

59. Layout walls
60. Maintain foundation excavation
61. Maintain soling work
62. Maintain foundation PCC/RCC work
63. Maintain Construction joints
64. Maintain weep hole
65. Maintain filter materials
66. Maintain wall dimension
67. Maintain retaining walls
68. Maintain breast wall
69. Maintain toe wall
70. Maintain revetment wall
71. Maintain dry/masonry/composite walls
72. Maintain gabion wall/construction
73. Maintain gabion crate/box weaving

Duty: H: Supervise Cross Drainage Construction

Tasks:

74. Assist for layout
75. Maintain foundation excavation
76. Manage dewatering dimension
77. Maintain line/level of formwork
78. Inspect staging
79. Maintain line level of sub-structure
80. Maintain line level of super-structure
81. Maintain line/level of formwork
82. Maintain protection works

Duty: I: Supervise Roadside Drain Construction

Tasks:

83. Layout for roadside drain
84. Assure/monitor quality of concrete work
85. Maintain dimension of masonry work
86. Maintain dimensions/slopes
87. Supervise plastering
88. Supervise curving
89. Maintain surface/sub-surface drainage

Duty: J: Supervise Bio-engineering Works

Tasks:

90. Supervise preparation of live stakes grass slips
91. Perform layout
92. Supervise plantation work
93. Supervise caring of plants
94. Protect plants

Duty: K: Supervise Gravel Road Construction

Tasks:

95. Control Traffic
96. Maintain gravel sizing
97. Maintain compaction
98. Maintain thickness
99. Maintain edging

Duty: L: Supervise Metalled Road Construction

Tasks:

- 100. Maintain penetration macadam work.
- 101. Maintain ottaseal
- 102. Maintain asphalt concrete work
- 103. Maintain single surface treatment work
- 104. Maintain double surface treatment work
- 105. Maintain concrete pavement
- 106. Maintain stone soling pavement

Duty: M: Manage Construction Works

Tasks:

- 107. Prepare/follow schedule
- 108. Manage labor force/road building groups
- 109. Manage materials
- 110. Manage machine
- 111. Manage money
- 112. Manage minute/document

Duty: N: Handle/maintain tools/materials/equipment

Tasks:

- 113. Handle measuring tape
- 114. Handle pedometer
- 115. Handle altimeter
- 116. Level pipe/sprit level
- 117. Handle surveyor compass
- 118. Handle Abney level
- 119. Handle auto level
- 120. Handle calculator
- 121. Operate computer
- 122. Apply global positioning system
- 123. Handle wheel barrow

Duty: O: Manage Health/Environment

Tasks:

- 124. Maintain waste disposal system

- 125. Manage safe/healthy drinking water
- 126. Be familiar with communicable diseases
- 127. Create safe working environment
- 128. Be familiar with the management of HIV/STD
- 129. Minimize noise/dust pollution
- 130. Enforce to manage quarry site
- 131. Facilitate to dispose unwanted oil

Duty: P: Communicate with others

Tasks:

- 132. Make telephone calls
- 133. Receive telephone calls
- 134. Write letters
- 135. Write simple reports
- 136. Communicate with seniors
- 137. Communicate with juniors/labors
- 138. Communicate with peers
- 139. Communicate with contractors
- 140. Communicate with users' committee
- 141. Communicate with user's group

Duty: Q: Enforce Safety Rules

Tasks:

- 142. Maintain first aid kit box
- 143. Perform simple/common first aids
- 144. Enforce safety wares
- 145. Maintain accidental records
- 146. Orient/inform about possible risks/hazards
- 147. Enforce to follow traffic signals
- 148. Apply fire safety measures

Duty: R: Maintain Records

Tasks:

- 149. Keep records of attendance
- 150. Maintain muster roll
- 151. Keep records of tools/equipment/materials used
- 152. Maintain log book

- 153. Maintain simple A/C books
- 154. Identify/facilitate to apply various formats of records
- 155. Apply fire safety measures
- 156. Maintain daily diary
- 157. Keep records of work progress
- 158. Prepare work progress records
- 159. Submit records/reports to the concerned

Duty: S: Perform Road Maintenance Works

Tasks:

- 160. Supervise routine maintenance
- 161. Supervise recurrent maintenance
- 162. Supervise periodic maintenance
- 163. Supervise emergency maintenance
- 164. Supervise rehabilitation maintenance

Duty: T: Grow Professionally

Tasks:

- 165. Attend meetings/seminars/work shops
- 166. Consult experts
- 167. Consult professional books/manuals
- 168. Participate in professional organizations
- 169. Follow professional rules/regulations/ethics
- 170. Consult professional journals/magazine
- 171. Discuss with peers
- 172. Attend professional trainings
- 173. Seek/attend for higher education
- 174. Browse www

Duty: U: Develop Entrepreneurial Skills

Tasks:

- 175. Develop small business planning skills
- 176. Develop small business organizing skills
- 177. Develop small business direction skills
- 178. Develop small business controlling skills
- 179. Prepare a small business plan
- 180. Prepare a budget for a small business

