

## Practical Question Paper

Job role: Bar Bending and Steel Fixer (CON/Q0203)

Level: 4

**Total Marks: 480**

**Time: 5 hours 30 min**

**CON/NO204 Read and understand routine drawings/sketches and Bar Bending Schedule**

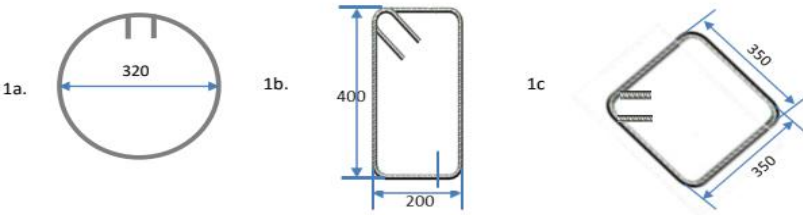
Task to be performed by each individuals.

**Requirement for the task:-**

- a). Reinforcement sketch
- b). Bar Bending Schedule (may be of the same sketch or different one).
- c). Sets of question paper.
- d). Answer sheets.

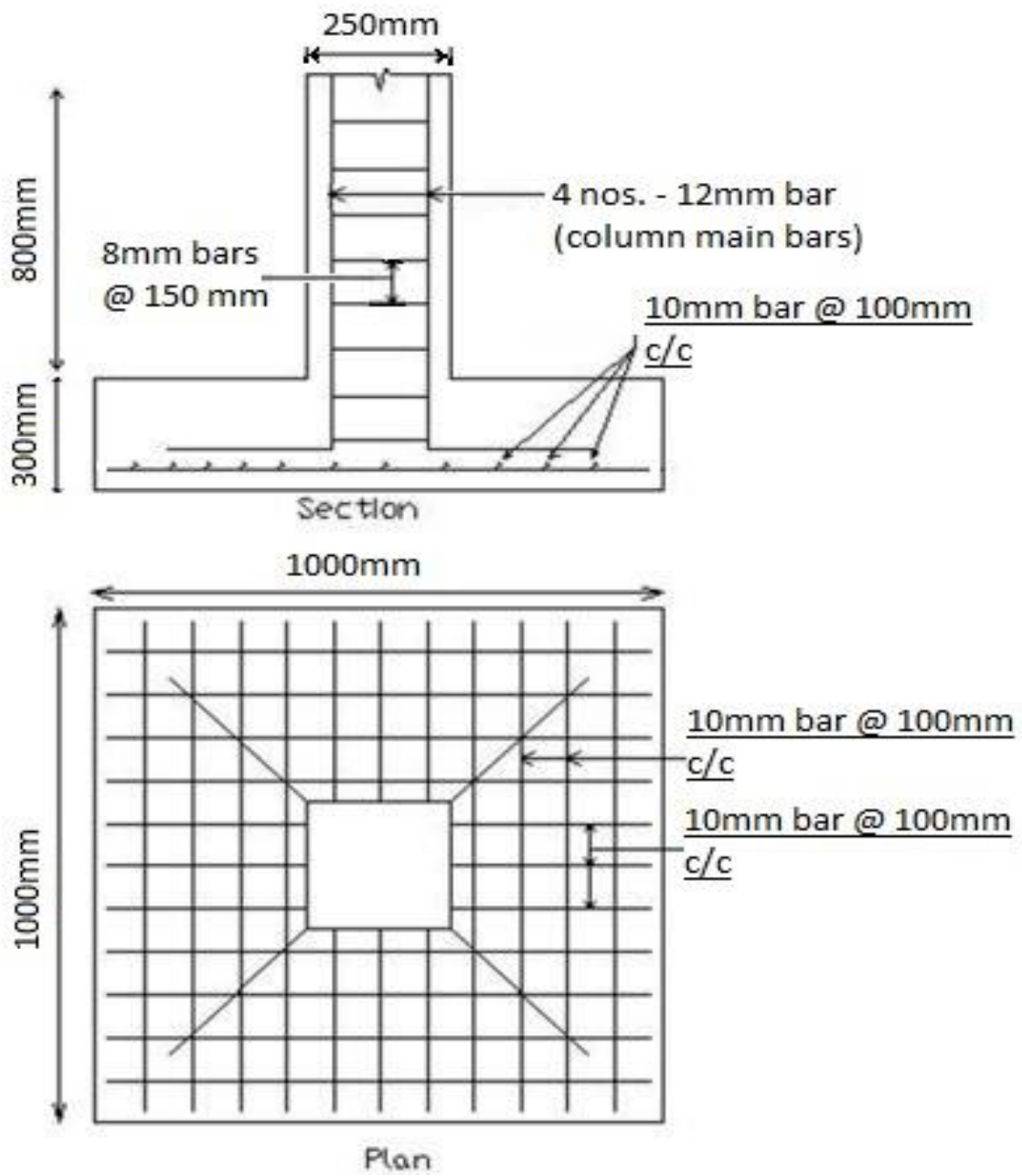
**Infrastructure required:-**

- a). A class room (minimum 30 students seating capacity) with projector, white board, writing materials.

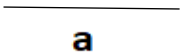
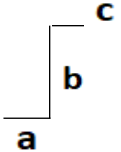
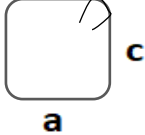
Sl.No:	Practical skill assessment question	Marks	Duration
1	Identify the RCC structure shown in Fig:- 1. Also mention its dimensions and shape.	10	<b>60 min</b> (1 hrs)
2	List out main bar, distribution bar, stirrups, extra bar with their position of placement from the given drawing in fig:-1.	10	
3	Calculate number of chairs/ spacer bar required for the RCC structure shown in fig:-1 and calculate its cutting length and height.	10	
4	Calculate the cutting length of the stirrups (any two) with hook as per following drawing. 	20	
5	Calculate the total numbers of bars (consider standard length of a bar as 12m) of different diameter required to fabricate the given RCC structure as per the fig:1/ BBS.	30	

**Total marks** 80

**Total duration** 60 min



**Fig: 1**

BAR EBNRING SCHEDULE													
Bar No.	Bar Shape	a (m)	b (m)	c (m)	Dia (mm)	Spacing (mm)	Cutting length (m)	Nos. of bar	Nos. of members	Total length of bar(m)	Unit weighth of bar (kg/m)	TOTAL WEIGHT OF BAR (kg)	
1		0.9	0	0	10	100	0.9	20	1	18	0.617	11.11	
2		0.3	1.05	0.15	12	*	1.452	4	1	5.808	0.889	5.16	
3		0.2	1.05	0.2	8	150	0.88	8	1	7.04	0.395	2.78	
											Total reinforcement weight (kg)		19.06

Note: BBS for the reinforcement drawing shown in fig.: 1

**CON/NO205 Use hand and power tools for cutting and bending of reinforcement****Task to be performed by each individuals within a team of 3 members.****Requirement for the task:-**

- a). Reinforcement sketch.
- b). Bar Bending Schedule (may be of the same sketch or different one).
- c). Sets of question paper.
- d). Answer sheets.

**Infrastructure required:-**

- a). A class room (minimum 30 students seating capacity) with projector, white board, writing materials.
- b). **Hand tools and accessories:** chalk, measuring tape, hacksaw, chisel, hammer, rail base, bar-bending lever (for different size rebars- 8mm to 12mm), binding hook.  
**Power Tools:** bar cutting machine, angle grinder, bar bending machine.
- c). Workshop
- d). Store room/store yard (having rebars of 8mm, 10 mm, 12mm, 16mm dia., binding wire )
- e). Safety equipment room (having all PPE's, safety equipments).

Sl.No:	Practical skill assessment question	Marks	Duration
1	List out and select hand tools (from the displayed tools) for cutting the rebars.	10	<b>120 min</b> (2 hrs)
2	Mark on the rebars as per the cutting length and cut them in order to fabricate the RCC structure shown in fig:-1.	30	
3	Mark on the rebars (obtained after cutting) and bend them into required form of stirrups/ longitudinal bars/ extra bars/ chairs as per given the RCC structure shown in fig:-1.	30	
4	Tag and stack the rebars (obtained after cutting and bending) according to their usage for the fabrication of the RCC structure shown in fig:-1.	10	

**Total marks** 80  
**Total duration** 120 min

**CON/NO206 Prepare, fabricate, place, and fix reinforcement for RCC structures.****Task to be performed by a team consisting of 3 members.****Requirement for the task:-**

- a). Reinforcement drawing
- b). Bar Bending Schedule.
- c). Sets of question paper.
- d). Answer sheets.

**Infrastructure required:-**

- a). A class room (minimum 30 students seating capacity) with projector, white board, writing materials.
- b). **Hand tools:** chalk, measuring tape, hacksaw, chisel, hammer, rail base, bar-bending lever (for different size rebars- 8mm to 12mm), binding hook.  
**Power Tools:** bar cutting machine, angle grinder, bar bending machine.
- C). Workshop
- d). Store room/store yard (having rebars of 8mm,10 mm, 12mm, 16mm dia., binding wire )
- e). Safety equipment room (having all PPE's, safety equipments).

Sl.No:	Practical skill assessment question	Marks	Duration
1	Demonstrate the correct sequence for fixing of rebars of the RCC structure shown in fig:-1	7	<b>120 min</b> (2hrs)
2	Mark the reinforcement layout for fabricating of the above mentioned RCC Structure.	10	
3	Identify and select the rebars for placement as per the above stated sequence.	8	
4	Place the rebars (selected in Sl. No. 3) as per sequence and fixed them using appropriate tie to fabricate the above mentioned RCC Structure.	30	
5	Measure and maintain uniform spacing of longitudinal rebars/ stirrups while fabricating the above mentioned RCC Structure.	10	
6	Place and fix the cover blocks/ chairs as per the requirement for the above mentioned RCC Structure.	5	
7	Check quality of reinforcement work with reference to spacing, placement, shape and size after the fabrication of the above mentioned RCC Structure. Note: Above quality should be evaluated within the standard tolerance limit.	10	

**Total marks** 80  
**Total duration** 120 min

	Duration	Marks
<b>CON/N8001 Work effectively in a team to deliver desired results at the workplace</b>	Simultaneous to the duration of task performed as per N0204/ 205/ 206/9001	80
<b>CON/N8002 Plan and organize work to meet expected outcomes</b>		80

<b>CON/N9001 Work according to personal health, safety and environment protocol at construction site.</b>			
<b>Infrastructure required:-</b>			
a). A class room (minimum 30 students seating capacity) with projector, white board, writing materials.			
b). <b>Hand tools:</b> chalk, measuring tape, hacksaw, chisel, hammer, rail base, bar-bending lever (for different size rebars- 8mm to 12mm), binding hook.			
<b>Power Tools:</b> bar cutting machine, angle grinder, bar bending machine.			
C). Workshop			
d). Store room/store yard (having rebars of 8mm,10 mm, 12mm, 16mm dia., binding wire )			
e). Safety equipment room (having all PPE's, safety equipments)			
Sl. No.	Practical skill assessment question	Marks	Duration
1	How a person identify hazards or risks at the site and report to their supervisor?	10	30 min
2	How a person respond to emergency and evacuation procedures in the case of accidents, fire or mock drills?	8	
3	List out all the PPE used during the job of bar bender and steel fixer, and demonstrate their use ?	25	
4	List out PPE used for other construction activities (brick work, IPS flooring, plastering)?	5	
5	List out different types of fire extinguishers.	3	
6	Demonstrate the operating procedure for the given Fire Extinguishers.	5	
7	Demonstrate how to handle tools, materials and equipment with safety.	8	
8	Demonstrate how to place a ladder against the wall safely.	4	
9	Check for the housekeeping and shifting of surplus materials/ waste to the designated yard.	12	
		<u>80</u>	

**CON/N8001 Work effectively in a team to deliver desired results at the workplace**

Based on the performance of N0204/205/206  
(Task- Prepare, fabricate, place and fix reinforcement for RCC structures)

**Note: This should be not given to the candidates.**

Sl. No.	Practical skill assessment question	Marks	Duration
1	Observe the candidate's cooperation within the team in terms of willingness to share the task responsibility.	10	Simultaneous to the duration of task performed as per N0204/205/206
2	Observe how the candidate escalate deviations to the seniors/ assessors while performing the given task.	15	
3	Observe the candidate's approach towards addressing and reporting the problems faced while performing the given task.	15	
4	Check the alertness/attentiveness of trainee for instructions by assessor.	10	
5	Observe how the candidate seeks clarification and resolve the issues raised during performing the task.	15	
6	Observe the individual's coordination with his teammates in completing task within allotted time.	15	

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**CON/N8002 Plan and organize work to meet expected outcomes**

Based on the performance of N0204/205/206  
(Task- Prepare, fabricate, place and fix reinforcement for RCC structures)

**Note: This should be not given to the candidates.**

Sl. No.	Practical skill assessment question	Marks	Duration
1	How a person understand the target and time line set by supervisor to perform the given task at the construction site?	15	Simultaneous to the duration of task performed as per N0204/205/206
2	How a person plan activities as per schedule and sequence while performing the given task?	15	
3	How a person provide guidance to the subordinates to complete the task?	10	
4	How a person arrange required resource such rebars, binding wire, tools prior to the commencement of the task.	15	
5	How a person utilize required resource (as in sl. No.-4) effectively during performing the task.	10	
6	How a person adhere to the standard instructions while performing the given task.	15	



**CON/N9001 Work according to personal health, safety and environment protocol at construction site.**

Based on the performance of N0204/205/206  
(Task- Prepare, fabricate, place and fix reinforcement for RCC structures)

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