

Bar Bender and Steel Fixer

Theory Paper

Assessment for Certification, Level 4

Total Marks: 120 marks

Time: 90 min

Qualification Pack	Bar Bender and Steel Fixer
Reference ID	CON/Q0203
NSQF Level	4
Sector	Construction
Occupation	Bar Bending and Fixing

CANDIDATE'S DETAILS (Fill in capital letters only)		
CANDIDATE'S NAME		
CANDIDATE'S FATHER NAME		
SDMS ENROLMENT ID		AADHAR NUMBER
BATCH ID		
TRAINING CENTER NAME		LOCATION
TRAINER NAME	SIGNATURE:	
ASSESSOR NAME	SIGNATURE:	
CANDIDATE'S SIGNATURE		DATE

TP/ TC stamp with signature:

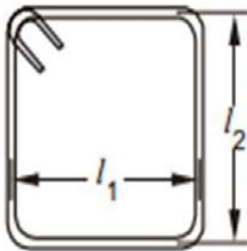
Read the instruction carefully before starting:

- The assessment comprises of Theory, Practical.
- The theory section has 6 parts, consisting 48 numbers of questions (24 questions each for 2 and 3 marks).
- Write your name, aadhar number, father name, signature in the designated space.
- Use only Blue/ Black Ball point pens to fill/ answer the question paper.
- Read the questions carefully before answering.
- Put a tick mark (✓) against the right option.
- The tick mark (✓) should only be in the box which you want to mark as an answer.
- Select the most appropriate answer for multiple choice questions.

Theory Question Paper

CON/N0204 Read and understand routine drawings/ sketches and Bar Bending Schedule.

1. What is the meaning of rebar statement "6 – 8Φ @300 c/c"? **(3 marks)**
 - a) 8 numbers of 6mm diameter rebar at a spacing of 300 mm center to center
 - b) 300 numbers of 8mm diameter rebar at a spacing of 6 mm center to center
 - c) 8 numbers of 6mm diameter rebar at a spacing of 250 mm center to center
 - d) 6 numbers of 8mm diameter rebar at a spacing of 300 mm center to center
2. The diameter of the main reinforcement bar in column should not be less than _____. **(3 marks)**
 - a) 8 mm
 - b) 10 mm
 - c) 12 mm
 - d) 16 mm
3. Which of the following gives total length of rebar as per BBS? **(2 marks)**
 - e) Numbers of bars x length of bar
 - f) Diameter of bars x length of bar
 - g) Total area of bar/ cross section area of bar
 - h) Unit weight of bar x length of bar
4. What is the cutting length of the stirrup shown below? (d= diameter of bar) **(3 marks)**



- a) $2 \times (L_1 + L_2) - 5 \times 2d + 2 \times 9d$
 - b) $2 \times (L_1 + L_2) + 5 \times 2d + 2 \times 9d$
 - c) $2 \times (L_1 \times L_2) - 5 \times 2d + 2 \times 9d$
 - d) $2 \times (L_1 \times L_2) - 5 \times 2d + 2 \times 9d$
5. Unit weight of rebar will be given by _____ (in kg/m)? **(3 marks)**
 - e) $(D \times D) / 162$
 - f) $(D \times D) / 555$
 - g) $(D \times D) / 126$
 - h) None
 6. Which of the following should be referred while cutting and bending the rebars? **(2 marks)**
 - a) Concrete mixture
 - b) Sketch/ drawings
 - c) Number of chairs
 - d) All of these
 7. What is the purpose of chair bars? **(2 marks)**

- a) Decrease the strength of structure
- b) Prevent corrosion
- c) Support metal rebars
- d) All of the above

8. Identify the image shown below?

(2 marks)



- a) Cover block
- b) Chair bar
- c) Tie
- d) None of these

CON/N0205: Use hand and power tools for cutting and bending of reinforcement.

9. What is the allowable tolerance limit for the diagonal measurement of a stirrup?

(3 marks)

- a) +/- 15 mm
- b) +/- 12 mm
- c) +/- 05 mm
- d) +/- 10 mm

10. Identify the tool shown below?

(2 marks)



- a) Bar bending lever
- b) Bar threading lever
- c) Bar binding lever
- d) None

11. Identify the power tool shown below?

(2 marks)



- a) Bar bending machine
- b) Bar threading machine
- c) Bar shearing machine
- d) Bar straightening machine

12. Why is it important to tag a rebar?

(2 marks)

- a) To decorate it
- b) To identify it
- c) To test it
- d) All of these

13. Which of the following is the ideal diameter of spandrel to bend a 25 mm diameter rebar?

(3 marks)

- e) 16 mm
- f) 50 mm
- g) 25 mm
- h) 10 mm

14. Identify the purpose of following power machine?

(2 marks)



- a) Polishing
- b) Bar Bending
- c) Bar cutting
- d) All of these

15. What is the unit weight of steel?

(3 marks)

- a) 8750 kg/m³
- b) 8570 kg/m³
- c) 7750 kg/m³
- d) 7850 kg/m³

16. 1 foot = _____ inch = _____ cm?

(3 marks)

- a) 11 & 30.48
- b) 12 & 29.48
- c) 11 & 29.48
- d) 12 & 30.48

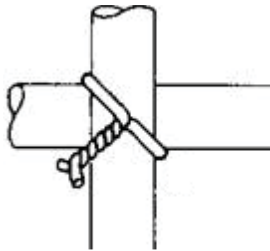
CON/N0206: Prepare, fabricate, place and fix reinforcement for RCC structures.

17. Which of the following should be fabricated before shuttering in normal condition? **(2 marks)**
- a) column
 - b) beam
 - c) slab
 - d) All of the above

18. What is the maximum percentage of splicing allowed in a single lapping zone? **(3 marks)**
- a) 60%
 - b) 70%
 - c) 45%
 - d) 50%

19. Which of the following tie is recommended for lapping of rebar? **(2 marks)**
- a) Crown tie
 - b) Splice tie
 - c) Hair ring tie
 - d) Slash tie

20. Identify the types of tie shown in the figure? **(3 marks)**



- a) Crown tie
 - b) Slash tie
 - c) Hair pin tie
 - d) Splice tie
21. What will be the tolerance level for the cutting length of stirrup when minimum length is specified? **(2 marks)**
- a) + 5 mm
 - b) + 50 mm
 - c) + 10 mm
 - d) None
22. What will be the lap length of 25 mm diameter rebar to extend a column? **(3 marks)**
- a) 1000 mm
 - b) 1400 mm
 - c) 1300 mm
 - d) 1250 mm
23. Rearrange the sequence of fabrication of the beam reinforcement. **(3 marks)**
- A. Hang top main rebar horizontally using required support
 - B. Insert bottom extra rebar from end of the beam

- C. Insert bottom main bars and tie on its position
- D. Mark and insert required number of stirrups
 - a) ADBC
 - b) DBAC
 - c) ADCB
 - d) BCDA

24. Which one of the following required lap of the rebars during its fabrication? **(2 marks)**
- a) Beam
 - b) Column
 - c) Slab
 - d) All of the above

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

25. Team occur when a number of people have _____ and recognize that their personal success is dependent on the success of other? **(2 marks)**
- a) Same manager
 - b) Similar jobs
 - c) A common goal
 - d) A shared work environment
26. What should you do in case you have a conflict with one of your teammates? **(2 marks)**
- a) Keep quiet and not talk to him
 - b) Fight with him
 - c) Try to solve by discussing
 - d) Revenge him
27. What will happen if you do not interact with your co- worker? **(2 marks)**
- a) De-motivation
 - b) Encouragement
 - c) Excitement
 - d) None
28. Team creativity can be promoted in which of the following ways? **(3 marks)**
- a) Establishing a competitive environment to promote creative ideas
 - b) By reporting to the supervisor
 - c) Stressing deadlines to encourage intensity and focus
 - d) None
29. What will you do in case you are not well versed with some critical procedure in your work? **(2 marks)**
- a) Stay quiet and finish it somehow
 - b) Ask for help from the procedure expert
 - c) Decline to work
 - d) Any one of these

30. Which among the following will you do if the bar bending machine provided to you has a fault?

(3 marks)

- a) Use the damaged machine
- b) Report to the supervisor
- c) Dispose the machine
- d) None

31. Which of these is not a key feature of a team?

(3 marks)

- a) Mutual independence
- b) Mutual purpose
- c) Shared responsibilities
- d) Working in a same department

32. Teamwork in an organization leads to organizational:

(3 marks)

- a) Empowerment
- b) Weakness
- c) Economy fall
- d) Skills

CON/N8002: Plan and organize work to meet expected outcomes.

33. First step in planning process is to?

(3 marks)

- a) Set an objective
- b) Evaluate alternatives
- c) Determine strength & weakness
- d) None

34. Sharing work is a good idea when?

(2 marks)

- a) People are nice to you
- b) When you take in other's skill set into consideration
- c) When you are feeling lazy
- d) When you are sick

35. Work done should be of high quality despite constraints?

(2 marks)

- a) No
- b) yes
- c) impossible
- d) depends on manager

36. Which among the following is/are required when setting a work schedule?

(2 marks)

- a) Resource required
- b) Time required for completing per task component
- c) Both of these
- d) None

37. Which among these resources should be estimated before starting the work?

(3 marks)

- e) Quantity of materials
- f) Leaves

- g) Wastage of materials
 - h) All of these
38. What would happen if a bar bender produces a lot of output in given time but without adhering to the quality specifications? **(2 marks)**
- e) The supervisor would love it
 - f) The team may earn a bonus from the employer
 - g) Nothing would happen
 - h) The work may fail while inspection
39. Which of the statement is true? **(3 marks)**
A good objective should
- I. clarify the desired result;
 - II. Enables achievement to be measured; and
 - III. Need not specify a time scale
- a) I. only
 - b) All of them
 - c) I. and II.
 - d) II. Only
40. Which of the following is the basic requirement of preparing work schedule? **(3 marks)**
- a) To measure the quantity of work done
 - b) To understand the timelines
 - c) To assess the quality of work done
 - d) To understand the sequence of work

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

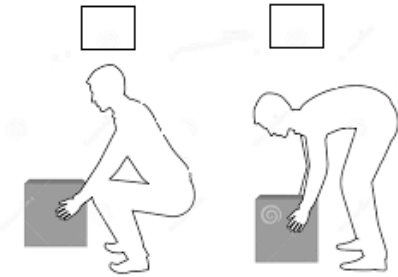
41. What should you do in case the fire alarm start ringing? **(2 marks)**
- a) Keep working
 - b) Immediately stop the work and evacuate
 - c) Create a panic situation
 - d) None
42. Identify the unsafe working practice amongst the following? **(3 marks)**
- a) Welding without a mask
 - b) Walking bare feet at construction site
 - c) Using wires with no insulation
 - d) All of these
43. Identify the sign shown below: **(2 marks)**



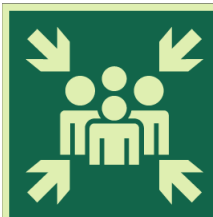
- a) Smoke zone
- b) Fire exit

- c) No parking
- d) No smoking

44. Which of the following is the correct body posture while lifting of heavy load? **(2 marks)**



45. Identify the safety sign shown below: **(3 marks)**



- a) Safe assembly area
- b) Fire exit
- c) Meeting area
- d) Cafeteria

46. What are the three basic requirements of a fire? **(3 marks)**

- a) Fuel, heat and hydrogen
- b) Fuel, heat and Sulphur
- c) Fuel, heat and nitrogen
- d) Fuel, heat and oxygen

47. Identify the item from the image given below. **(2 marks)**



- a) Half body harness
- b) Half body apron
- c) Full body harness
- d) Full body apron

48. Which of the following basic emergency equipment used while working in a confined space? **(3 Marks)**

- a) Breathing apparatus
- b) Emergency lamp
- c) Sun safety glass

d) Fire extinguisher