



Tertiary and Vocational Education Commission
Knowledge Assessment – March/ April 2021
Construction Site Supervisor
National Vocational Qualification – Level 04



Time: 03 Hours

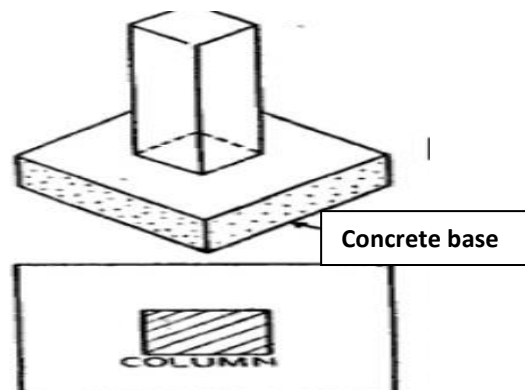
Instructions for the Candidates


- This Question Paper Comprises of 2 sections as Part 1 & 2
 - This paper consists of Multiple Choice Questions (MCQ) and short answer questions
 - Choose the most suitable answer from the given four answers of each questions in Part A and mark as “X” in the appropriate places of the answer sheet .Answer any five Questions of part B
 - This question paper consists of 13 pages.
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Part 1

1. The initial step for setting out a building is,
 - a. Establishing the corners
 - b. Measuring the distances of walls
 - c. Establishing the center line
 - d. All of the above
2. Most appropriate reason for construction a ceiling is to,
 - a. Have a good appearance
 - b. Reduce the room height
 - c. Support the roof
 - d. Reduce heat penetration
3. What is the recommended type of sand for internal wall plastering?
 - a. Should be rough
 - b. Should be rough with sharp edges
 - c. Should be soft and fine
 - d. Can be any nature
4. Data recording for physical progress assessment is very important. What do you use for the task?
 - a. Field note book
 - b. Exercise book
 - c. A piece of paper
 - d. CR book

5. The comfortable angle with the ground for a staircase is about,
 - a. $45^{\circ} - 48^{\circ}$
 - b. $20^{\circ} - 25^{\circ}$
 - c. $15^{\circ} - 20^{\circ}$
 - d. $35^{\circ} - 38^{\circ}$
6. Leveling the ground and spreading the loose material for site clearing, is carried by using a,
 - a. Excavator
 - b. Grader
 - c. Scraper
 - d. Tractor
7. Which statement is **true** for construction records?
 - a. The evidence of work done in the past should be maintained as a proof
 - b. The evidence of work done can be destroyed once the site is handed over
 - c. The evidence of work done cannot be used in Court of Law
 - d. The evidence of work done is the responsibility of the Company Lawyer
8. Theodolite is an instrument used to,
 - a. Measure lengths of a site
 - b. Measure horizontal angles only
 - c. Measure vertical angles only
 - d. Measure both horizontal and vertical angles
9. Select the choice of material used for superior plastering,
 - a. Clinker
 - b. Plaster of Paris
 - c. Hydrated Lime
 - d. Ceramic powder
10. What belongs to the written communication?
 - a. Letter
 - b. Telephone
 - c. Lectures
 - d. Loudspeakers
11. What is the type of foundation in the sketch?
 - a. Shallow foundation
 - b. Single footing
 - c. Sloped foundation
 - d. Stepped footing

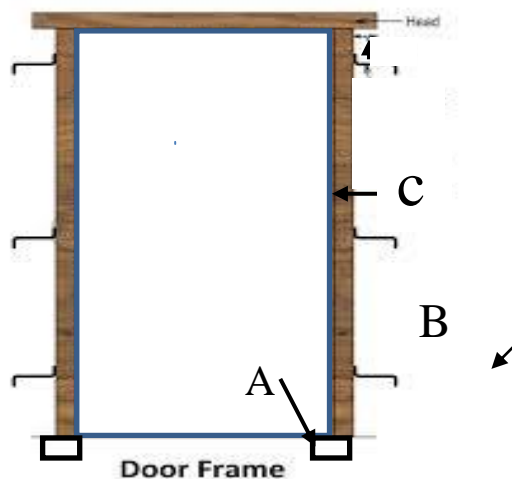


12. How do you check the accuracy of a setting out of a simple rectangular garage?
- Re measuring the dimensions
 - By checking the diagonals
 - Using spirit level
 - Using water tube
13. You have observed a worker is working with suffering from cough, cold and fever. You should,
- Send him home, giving a mask
 - Allow to work considering it is common
 - Send him to IDH as he is a Corona patient
 - Send him to a nearest medical center immediately
14. There is a 1.5m cantilever section of a slab for a balcony, At the edge of the cantilever section there are,
- More reinforcement on the top layer and less at the bottom
 - More reinforcement on the bottom and less at the top layer
 - Equal reinforcement at the bottom and top layers
 - Top reinforcement is $\frac{1}{2}$ size of the bottom reinforcement layers
15. Name three types of tools that a Construction Supervisor requires for day to day works,
- Mamoty, shovel and crow bar
 - Pen, note book and measuring tape
 - Calculator, A4 papers and a pencil
 - Plumb bob, water level and spirit level
16. Identify the figure given in a water supply network,
- Pump
 - Stop valve
 - Non -return valve
 - Ball valve
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17. How do you extract the OT hours of a skilled laborer at a construction site?
- From check roll
 - From attendance register
 - By asking the relevant person
 - By monitoring his working hours

18. Main parts of a door frame are given in the sketch; Name A, B and C respectively,

- a. Holdfast, sill, Jamb
- b. Jamb, holdfast, Rebate
- c. Sill, holdfast, Rebate
- d. Jamb, holdfast, post



19. A segment of a canal has embankment on both sides for a length of 100m. Embankment is 4m in height, 8m wide at the top and maintains side slopes at 1:1.5. Calculate the approximate volume of the earth work for embankments,

- a. 5600 m³
- b. 11200 m³
- c. 22400 m³
- d. 12000 m³

20. Flexible road pavement transmits the load to the ground through,

- a. Base / subgrades only
- b. Sub base / subgrades
- c. To sides Only
- d. Not capable of transmitting

21. What is the fitting that helps to maintain the water seal in waste water / sewage disposal appliances?

- a. Vent pipe
- b. gulley
- c. Ball valve
- d. Trap

22. Out of the given four construction materials below, what will be the most economical and commonly used material in construction?

- a. Aluminum
- b. Copper
- c. Carbon steel
- d. Stainless steel

23. Hollow blocks are more suitable to use in,
- Partition walls
 - External walls
 - Retaining walls
 - Gable walls
24. Which of the following must be included in a Supervisor's planning schedule?
- Action of Project Manager
 - Labour allocation
 - Material purchase prices
 - Specifications
25. What is the final setting time of Ordinary Portland Cement?
- Not more than 45 minutes
 - Not more than 10 hours
 - Not more than 60 minutes
 - Not more than 24 hours
26. Sheep foot rollers are used to compact,
- Clay soil
 - Sandy soil
 - Hard soil
 - Any type of soil
27. What is the legal requirement for every construction company,
- Organizing annual welfare event
 - Maintaining an accident record book
 - Computer facility to all workers
 - Bonus at the year end
28. Reinforcement makes,
- Concrete Strong in compressive strength
 - Concrete Strong in Tensile strength
 - No effect in concrete neither in compressive nor in tensile strength
 - Irregular effects in tension strength
29. What are the Personal Safety Equipment to be used when cutting a bar using a gas cutter?
- Body harness, goggles and gloves
 - Helmet, ear harness, face mask
 - Boots, body harness and gloves
 - Safety boots, face shield, goggle

30. What are the wastes categorized as hazardous waste?

- a. Kerosene oils, tree cuttings, grass cuttings
- b. Grease, paints, quarry dust
- c. Vegetable waste, food waste, news papers
- d. Bamboo, saw dust, tree corks

(1 X 30 = 30 Marks)

Part 2

Answer any five (05) Question

1. You are instructed by the Superior to organise concreting work of the third floor of a building at the site. Work to be carried out within two (02) weeks, having two shifts per day.

Answer the following questions related to this task,

- i. What are the skilled worker groups you will require? (02 marks)

- ii. What are the materials you will need? (02 marks)

- iii. What types of machinery/ equipment/ tools you will arrange? (02 marks)

- iv. What are the documents that you will refer to quantify the above three (03) resources? (02 marks)

- v. Explain briefly, how do you plan this task. (06 marks)

2. i. List out the work items that are being carried, up to the DPC level of a simple two storied building with pad foundation. (09 marks)
- ii. Name three (03) types of pipes that are being used for pipe laying for sewerage disposal systems. Select two (02) of them and discuss their advantages and disadvantages. (05 marks)

3. i. It is a key responsibility of a Supervisor, to manage the workforce to complete the Construction, satisfactorily within the agreed construction period. Describe the steps you will take for effective management of the workers. (06 marks)
- ii. Roads are not only developing cities and villages, but serve as conveyors of transporting various goods. So, roads should be durable and strong enough. Explain the key activities in a road construction. (06 marks)

iii. What is “vent pipe” in waste disposal systems?

(02 marks)

4. i. You are assigned to a construction site of a circuit bungalow located in the Yala sanctuary, and very close to an ancient sacred place. Apart from purely technical matters, describe the other important factors you should take care of as a Site Supervisor during the construction. You can make any assumptions, (08 marks)

- ii. Draw a sketch of a 5m long simply supported concrete beam supported by two columns at the two ends. Indicate how the reinforcement is laid. (06 marks)

5. i. Nowadays, concrete is an essential element in the construction industry. Explain the purpose and methods of “Curing” of concrete. (04 marks)
- ii. Explain the purpose of a retaining structure. Draw a cross section of a random rubble masonry retaining wall and name parts. (04 marks)

- iii. Site surveying and levelling are a part of the preliminary works at the site. Compare the use of two (02) methods for “Plane surveying” and ‘Geodetic Surveying”.

(06 marks)

6. Write short notes on the any four (04) of the following,

i. Log Book

ii. Preparation of slab Formwork

iii. Pile foundation

iv. Soakage pit

v. Calicut tile roof

(3.5 x 4 = 14 marks)