

COCHIN SHIPYARD LIMITED

(A Govt. of India Enterprise)

KOCHI -15

**OBJECTIVE TYPE WRITTEN TEST TO THE POST OF
SENIOR PROJECT OFFICER (CIVIL)**

20 SEPTEMBER 2023

DURATION OF THE TEST : 60 Minutes

MAXIMUM MARKS : 50

DO NOT OPEN THIS QUESTION PAPER-CUM-ANSWER BOOKLET UNTIL ASKED TO DO SO

GENERAL INSTRUCTIONS

1. **ANSWER ALL QUESTIONS.** There shall be no negative marks.
2. **Answers are to be marked using ✓ mark against the most appropriate option among the options provided in the Question Booklet using BALL POINT PEN.**
3. Rough work, if any, is to be done on space provided in the Question Booklet only. No separate sheet will be provided for rough work.
4. **Calculators, Mobile, Electronic items etc., are not permitted inside the examination hall.**
5. Candidates seeking, receiving and /or giving assistance during the test will be disqualified.
6. The right to exclude any question (s) from final evaluation rests with CSL.
7. Do not seek any clarification on any item in the Question Booklet. Use your judgment.

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Please fill in the following details using ball point pen.

| | |
|---------------------------------|--|
| Name of Candidate | |
| Registration No. | |
| Name of Post | |
| Signature of candidate | |
| Signature of invigilator | |

**THIS QUESTION PAPER-CUM-ANSWER BOOKLET SHOULD BE HANDED OVER
TO THE INVIGILATOR ON COMPLETION OF THE TEST**

PHASE I

**OBJECTIVE TYPE TEST FOR THE POST OF SENIOR PROJECT OFFICER (CIVIL) ON
CONTRACT BASIS FOR CKSRU, KOLKATA**

GENERAL KNOWLEDGE

1. Who is the author of the famous book “The Unbearable Lightness of Being” who passed away recently
 - a) Orhan Pamuk
 - b) Milan Kundera
 - c) Ruskin Bond
 - d) Rudyard Kipling

2. 15 September is celebrated as Engineer’s Day in honour of
 - a) A P J Abdul Kalam
 - b) M Visvesvaraya
 - c) Vikram Sarabhai
 - d) B C Roy

3. When was the first Indian lunar probe Chandrayaan-1 launched?
 - a) 2002
 - b) 2008
 - c) 2013
 - d) 2017

4. Which Indian shipbuilding company constructed the Indigenous aircraft carrier for Indian Navy
 - a) Garden Reach Shipbuilders & Engineers

- b) Goa Shipyard Limited
- c) Cochin Shipyard Limited
- d) Mazagon Dock shipbuilders Limited

5. Recently lithium reserves were discovered in following states/union territories in India

- a) Jammu & Kashmir, Rajasthan
- b) Jammu & Kashmir, Jharkhand
- c) Jammu & Kashmir, Odisha
- d) Rajasthan, Odisha

6. GDP of India is currently _____ largest in the world

- a) Second
- b) Third
- c) Seventh
- d) Fifth

7. In April 2022, which scheme was selected for PM's Award for Excellence in Public Administration?

- a) Smile
- b) Beti Bachao Beti Padhao
- c) UDAN
- d) Make in India

8. Which of the following books is written by Rajendra Prasad?

- a) India Divided
- b) An Autobiography: Towards Freedom
- c) The Discovery of India
- d) Glimpses of World History

9. _____ is also known as 'The Light of Asia'.

- a) Rumi
- b) Buddha
- c) Gandhi
- d) Swami Vivekananda

10. Who is the architect of the city Chandigarh?

- a) Zaha Hadid
- b) Edward Lutyens
- c) Le Corbusier
- d) Anish Kapoor

SUBJECT BASED

11. When a body is subjected to three mutually perpendicular stresses, of equal intensity, the ratio of direct stress to the corresponding volumetric strain is known as

- a) Young's modulus.
- b) Modulus of rigidity.
- c) Bulk modulus
- d) Poisson's ratio

12. Crushing strength of a first class brick should not be less than

- a) 3.5 N/mm²
- b) 7 N/mm²
- c) 10.5 N/mm²
- d) 14.0 N/mm²

13. Web crippling generally occurs at the point where

- a) Bending moment is maximum.
- b) Shearing force is minimum.
- c) Concentrated loads act.
- d) Deflection is maximum.

14. The type of pile which is driven at an inclination to resist inclined forces is known as

- a) Friction pile
- b) Sheet pile
- c) Batter pile
- d) Anchor pile

15. Modulus of rupture of concrete is measure of

- a) Flexural tensile strength.
- b) Direct tensile strength.
- c) Compressive strength.
- d) Split tensile strength.

16. Tie bars in cement concrete pavements are at

- a) Expansion joints
- b) Contraction joints.
- c) Warping joints
- d) Longitudinal joints

17. According to IS classification, the range of silt size particle is

- a) 4.75 mm to 2.00 mm
- b) 2.00 mm to 0.425 mm
- c) 0.425 mm to 0.075 mm
- d) 0.075 mm to 0.002 mm

18. The main factor to be considered while preparing a detailed estimate is

- a) Quantity of the materials.
- b) Availability of the materials.
- c) Transportation of materials.
- d) All of the above.

19. The losses are more in

- a) Laminar flow
- b) Transition flow
- c) Turbulent flow
- d) Critical flow

20. Theodolite is an instrument used for

- a) tightening the capstan-headed nuts of level tube.
- b) Measurement of horizontal angles only.
- c) Measurement of vertical angles only.
- d) Measurement of both horizontal and vertical angles.

21. The sludge does not contain waste form

- a) Bath rooms
- b) Wash Basins
- c) Kitchen Sinks
- d) Toilets

22. The following readings were taken with a dumpy level and a 4m levelling staff on a continuously sloping ground at 30m interval: 0.68m, 1.455m, 1.855m, 2.33m, 2.885m, 3.38m, 1.055m. The reduced level of fourth point was 79.1m. The reduced level of point that read 1.455m is
- a) 80.75m
 - b) 79.78m
 - c) 78.42m
 - d) 79.975m
23. Minimum grade of Reinforced cement concrete recommended in IS 456:2000 for marine works is
- a) M20
 - b) M25
 - c) M30
 - d) M40
24. Consolidation in soils
- a) Is a function of the total stress
 - b) Is a function of the effective stress
 - c) Is a function of pore water pressure
 - d) Does not depend on the present stress
25. Le Chatelier apparatus is used to determine
- a) Soundness of cement
 - b) Fineness of cement
 - c) Compressive strength of cement
 - d) Setting time of cement

26. The laboratory tests on a soil sample yielded following results: Natural moisture content=18%, Liquid limit=60%, Plastic limit=25%. The liquidity index of soil sample is

- a) 5
- b) 0.2
- c) -0.2
- d) -5

27. Identify the destructive test on RCC members out of the following tests

- a) Rebound hammer testing
- b) Core testing
- c) Ultrasonic pulse velocity testing
- d) Pull-out testing

28. Minimum Factor of safety considered in Static Initial pile load test is

- a) 2.5
- b) 3
- c) 1.5
- d) 2

29. Negative skin friction on a pile

- a) Acts downward and increases load carrying capacity of the pile
- b) Acts downward and decreases load carrying capacity of the pile
- c) Acts upward and increases load carrying capacity of the pile

d) Acts upward and decreases load carrying capacity of the pile

30. Bitumen of grade 80/100 means

a) penetration value at standard test condition is 0.8mm

b) penetration value at standard test condition is 0.8cm

c) penetration value at standard test condition is 8 to 10 cm

d) penetration value at standard test condition is 8 to 10mm

31. Which of the following test measures the toughness of road aggregates

a) Crushing strength test

b) Impact test

c) Abrasion test

d) Shape test

32. The % by weight of the aggregates whose thickness is less than 3/5th of their mean dimension

a) Roundness Index

b) Elongation Index

c) Flakiness Index

d) Angularity Index

33. In an activity, if the latest start time is 28 days and the earliest start time is 18 days, then the total float shall be

a) 46 days

b) 10 days

c) 9 days

d) 5 days

34. Which test is used to study the resistance of aggregates to weathering action?

a) Crushing test

b) Abrasion test

c) Soundness test

d) Impact Test

35. Which of the following is a Non-Destructive Test method to check the quality of concrete

a) Dye Penetrant test

b) Cube Test

c) Radiography Test

d) Ultrasonic Pulse Velocity Test

36. The modulus of rupture of concrete gives

a) the elastic strength of the concrete

b) the direct compressive strength of the concrete

c) the tensile strength of the concrete under bending

d) the characteristic strength of the concrete

37. The characteristic strength of the concrete is defined as that compressive strength below which not more than

- a) 10% of results fall
- b) 5% of results fall
- c) 2% of results fall
- d) None of the above

38. Maximum possible value of compaction factor for fresh (green) concrete is

- a) 0.5
- b) 1.0
- c) 1.5
- d) 2.0

39. The penetration test for bitumen is conducted at a temperature of

- a) 60°C
- b) 37°C
- c) 25°C
- d) 50°C

40. In case of 2-way slab, the limiting deflection of slab is:

- a) primarily a function of the long span
- b) primarily a function of the short span
- c) independent of long or short span
- d) dependent on both long and short spans
