

**COCHIN SHIPYARD LIMITED**

(A Govt. of India Enterprise)

KOCHI -15

**OBJECTIVE TYPE WRITTEN TEST TO THE POST OF  
PROJECT ASSISTANT (MECHANICAL)**

**20 APRIL 2024**

***DURATION OF THE TEST : 90 Minutes***

***MAXIMUM MARKS : 80***

**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.**

|                                 |  |
|---------------------------------|--|
| <b>Name of Candidate</b>        |  |
| <b>Registration No.</b>         |  |
| <b>Name of Post</b>             |  |
| <b>Signature of candidate</b>   |  |
| <b>Signature of invigilator</b> |  |

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

**OBJECTIVE TYPE TEST FOR THE POST OF PROJECT ASSISTANT (MECHANICAL)**  
**ON CONTRACT BASIS FOR CKSRU**

1. What new variant of COVID-19 emerged in late 2021, causing global concern?
  - a) Alpha variant
  - b) Omicron**
  - c) delta variant
  - d) SARS-CoV-2
  
2. Which country hosted the 2022 FIFA World Cup?
  - a) Brazil
  - b) Russia
  - c) South Africa
  - d) Qatar**
  
3. Who invented electricity
  - a) Albert Einstein
  - b) Marie Curie
  - c) Louis Pasteur
  - d) Benjamin Franklin**
  
4. The Oscar Award was won 36 times by
  - (a) Walt Disney
  - (b) Alfred Hitchcock
  - (c) Charlie Chaplin**
  - (d) Akira Kurosawa

5. National Maritime Day of India falls on

- (a) April 5
- (b) June 5
- (c) October 5
- (d) September 5

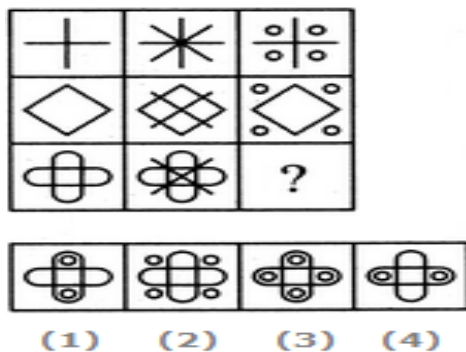
6. Look at this series: 80, 10, 70, 15, 60, ... What number should come next?

- (a) 20
- (b) 25
- (c) 30
- (d) 50

7. Odometer is to mileage as compass is to

- (a) speed
- (b) hiking
- (c) needle
- (d) direction

8. Select a suitable figure from the four alternatives that would complete the figure matrix.



(a) 1

(b) 2

(c) 3

(d) 4

9. Introducing a boy, a girl said, "He is the son of the daughter of the father of my uncle."

How is the boy related to the girl?

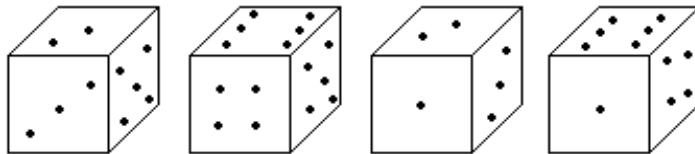
(a) Brother

(b) Nephew

(c) Uncle

(d) Son-in-law

10. How many points will be on the face opposite to in face which contains 2 points?



(a) 1

(b) 5

(c) 4

(d) 6

11. Calculate the simple interest on Rs. 8000 for 15 months at 6 paise per rupee per month.

(a) Rs. 7200

(b) Rs. 7300

(c) Rs. 7100

(d) Rs. 7000

12. A train running at the speed of 60 km/hr crosses a pole in 9 seconds. What is the length of the train?
- (a) 120 Meters
  - (b) 150 Meters
  - (c) 180 Meters
  - (d) 200 Meters
13. If  $0.75 : x :: 5 : 8$ , then  $x$  is equal to
- (a) 1.12
  - (b) 1.20
  - (c) 1.25
  - (d) 1.30
14. Pavan buys a scooter at a cost price Rs.5500 and he sells the scooter for 5800. Then gain Price
- (a) Rs.300
  - (b) Rs.800
  - (c) Rs.500
  - (d) Rs.200
15. A man's speed with the current is 15 km/hr and the speed of the current is 2.5 km/hr. The man's speed against the current is:
- (a) 8.5 km/hr
  - (b) 9 km/hr
  - (c) 10 km/hr
  - (d) 12.5 km/hr
16. If  $x=2+\sqrt{3}$  and  $y=2-\sqrt{3}$ , find the value of  $x^2+y^2$
- (a) 14
  - (b) 17
  - (c) 16
  - (d) 15
17. A can do a work in 15 days and B in 20 days, then (A + B)'s 1 day's work?
- (a) 7/60 days

(b) 7/15 Days

(c) 7/30 days

(d) 7/25 days

18. The LCM of four numbers 15, 25, 40 and 75 is?

(a) 600

(b) 500

(c) 400

(d) 300

19. If one-third of one-fourth of a number is 15, then three-tenth of that number is?

(a) 35

(b) 36

(c) 45

(d) 54

20. If ratio of the areas of two squares is 1:4, the ratio of their perimeters is

(a) 1:2

(b) 1:4

(c) 1:6

(d) 1:8

21. Read the sentence to find out whether there is any grammatical error in it. The error, if any will be in one part of the sentence. The letter of that part is the answer. If there is no error, the answer is 'D'.

**Sixty miles/are/a good distance.**

(a) Sixty miles

(b) are

(c) a good distance.

(d) No error.

22. What is the synonym of the word **'Parochial'**?

- (a) Abstract
- (b) Unorthodox
- (c) Baffling
- (d) Conservative**

23. The company's profits \_\_\_\_\_

- (a) have been steadily increasing**
- (b) have been steadily decreasing
- (c) have remained the same for years
- (d) have been affected by the pandemic

24. The word EXODUS which is the exact OPPOSITE of the given words.

- (a) Influx**
- (b) Home-coming
- (c) Return
- (d) Restoration

25. You are required to rearrange these parts, which are labelled P, Q, R and S to produce the correct sentence.

(P) with an idea to reach the deprived child

(Q) by the United Nations Organization

(R) the year 1979 has been declared as

(S) the International Year of the Child

- (a) PQRS
- (b) RSPQ
- (c) PSQR

(d) PRSQ

26. Choose the correct meaning of proverb/idiom, if there is no correct meaning given, option (d) (i.e.) 'None of these' will be the answer.

**A man of straw**

(a) A man of no substance

(b) A very active person

(c) A worthy fellow

(d) None of these

27. The team organised \_\_\_ friendly match with \_\_\_ Presidents of both \_\_\_ countries.

(a) A, The, The

(b) A, A, A

(c) THE, THE, THE

(d) THE, A, A

28. We judge ourselves by our thought, \_\_\_\_\_ others judge us by our actions

(a) when

(b) because

(c) whereas

(d) lest

29. What's the plural of "bush"?

(a) Bush's

(b) Bushes

(c) Bushies

(d) Bushees



30. One who possesses many talents

(a) Versatile

(b) Nubile

(c) Exceptional

(d) Gifted

31. Which casting defect occurs with excess moisture content in moulding sand?

(a) Porosity

(b) Shrinkage

(c) Blow holes

(d) Inclusions

32. Forging of a plain carbon steel is carried out.

(a) 750°C

(b) 900°C

(c) 1100°C

(d) 1300°C

33. Collapsible paste tubes are produced by

(a) Impact extrusion

(b) Hooker extrusion

(c) Hydrostatic extrusion

(d) Cold extrusion forging

34. The machining process that will be most appropriate to machine a turbine blade

with an aerofoil cross-section in a high-strength material

- (a) Chemical machining (CHM)
- (b) Electric Discharge Machining (EDM)
- (c) Ultrasonic Machining (USM)
- (d) Electrochemical Machining (ECM)

35. On drilling machine, which process is known as reaming

- (a) Enlargement of existing hole
- (b) Hole made by removal of metal along the hole circumference
- (c) Smoothly finishing and accurately sizing a drilled hole
- (d) All of the above

36. The following is used in heat treatment process as a quenching medium for obtaining a higher degree of hardness.

- (a) Mineral oil
- (b) Fatty acid
- (c) Waxes
- (d) Graphite suspensions

37. Which one of the following grinding wheels (with grade, grit and bond) is suitable for cutter grinding?

- (a) K 60 vitrified
- (b) K 320 vitrified
- (c) T 60 resinoid
- (d) T 320 resinoid

38. In CNC systems multiple microprocessors and programmable logic controller's work

(a) In parallel

(b) In series

(c) One after the other

(d) For 80% of the total machining time

39. For rapid prototyping 3D CAD model should be converted into\_\_\_\_\_file.

(a) SGC

(b) SLA

(c) STL

(d) SLS

40. UNIX is written in which language?

(a) C#

(b) C++

(c) C

(d) .NET

41. What are the 5 phases of 5S?

(a) Shine, Shut-Up, Sustain, Sort, Standardize

(b) Sustain, Sort, Standardize, Sushi mi, Shine

(c) Standardize, Sort, Sustain, Shine, Set-in-Order

(d) Sort, Sustain, Sushi, Shine, Standardize

42. The electrode is manufactured in two standard lengths namely?

(a) 250 mm and 350 mm

(b) 350 mm and 450 mm

(c) 400 mm and 500 mm

(d) 500 mm and 550 mm

43. Which of the following defects occur due to flux employed and electrode coating?

(a) Inclusion of slag

(b) Inadequate penetration

(c) Incomplete fusion

(d) Porosity

44. Which of the following does not relate to spark ignition engine?

(a) Spark plug

(b) Carburettor

(c) Fuel injector

(d) Ignition coil

45. Crank web deflection readings will give a positive indication of

(a) Worn main bearing journals

(b) Torsional stress deformation

(c) Slack thrust bearings

(d) Bearing shells shim dimensions

46. The air standard efficiency of an I.C. engine depends on

(a) Fuel used

(b) Speed of engine

(c) Compression ratio

(d) None of these

47. The working cycle in case of four stroke engine is completed in following number of

revolutions of crankshaft

- (a) 1/2
- (b) 1
- (c) 2
- (d) 4

48. The accumulation of carbon in a cylinder result in increase of

- (a) clearance volume
- (b) volumetric efficiency
- (c) ignition time
- (d) effective compression ratio

49. In case of gas turbines, the gaseous fuel consumption guarantees are based on

- (a) high heat value
- (b) low heat value
- (c) net calorific value
- (d) middle heat value

50. How the condenser capacity is expressed?

- (a) kcal/kg
- (b) kcal/hr
- (c) kg/kcal
- (d) kcal/kg

51. Steel can be hardened quickly by the process of

- (a) Induction hardening
- (b) Nitriding

- (c) Cyaniding
- (d) Carburizing

52. A cylindrical section having no joint is known as

- (a) Jointless section
- (b) Homogeneous section
- (c) Perfect section
- (d) Seamless section

53. If the radius of wire stretched by a load is doubled, then its Young's modulus will be

- (a) Doubled
- (b) Halved
- (c) Remain Unaffected
- (d) Become One-Fourth

54. In a tensile test, near the elastic limit zone, the

- (a) Tensile strain increases more quickly
- (b) Tensile strain decreases more quickly
- (c) Tensile strain increases in proportion to the stress
- (d) Tensile strain decreases in proportion to the stress

55. Proof resilience per material is known as

- (a) Resilience
- (b) Proof resilience
- (c) Modulus of resilience
- (d) Toughness

56. Which is known as corrective Maintenance?

- (a) Breakdown maintenance
- (b) Predictive maintenance
- (c) Preventive maintenance
- (d) Scheduled maintenance

57. What does EPOS stand for?

- (a) Electronic point of sale
- (b) Electronic purchase operating system
- (c) Estimated product order shipment
- (d) Exclusive products' organisational standing

58. Margin of safety in breakeven analysis is

- (a)  $\text{Actual sales} - \text{Sales at break-even point}$
- (b)  $\text{Actual sales} + \text{Sales at break-even point}$
- (c)  $\text{Actual sales} \div \text{Sales at break-even point}$
- (d) None of the above

59. A positive allowance will always result in a \_\_\_\_\_ fit.

- (a) Clearance
- (b) Interference
- (c) both 'a' and 'b'
- (d) Any of the above

60. A Micrometre having a negative of 0.03mm showing a reading of 25.52mm, the correct dimensions is \_\_\_\_\_

- (a) 25.49mm

(b) 25.55mm

(c) 25.60mm

(d) 25.46mm

61. The clearance ratio for a single stage compressor lies between

(a) 15% and 20%

(b) 1% and 2%

(c) 20% and 30%

(d) 4% and 10%

62. Modern marine turbochargers use a \_\_\_\_\_ type of compressor?

(a) Radial Flow

(b) Axial Flow

(c) Mixed Flow

(d) Turbulent Flow

63. A centrifugal compressor works on the principle of

(a) Conversion of pressure energy into kinetic energy

(b) Conversion of kinetic energy into pressure energy

(c) Centripetal action

(d) Generating pressure directly

64. Centrifugal pumps dealing with mud, slurry and sewage have

(a) Isolated impeller'

(b) Open impeller

(c) Closed impeller

(d) Semi closed impeller



65. Which of the following is positive displacement pump?

- (a) Reciprocating Pump
- (b) Propeller pump
- (c) Centrifugal pump
- (d) Jet Pump

66. A boiler in India should conform to safety regulations of

- (a) DIN
- (b) BS
- (c) ASTM
- (d) IBR

67. Adiabatic process is

- (a) essentially an isentropic process
- (b) non-heat transfer process
- (c) reversible process
- (d) constant temperature process

68. A type of crane that is built upon a bridge like overhead structure is

- (a) Jib Crane
- (b) Gantry Crane
- (c) Road mobile crane
- (d) Rubber Tyre gantry

69. Cranes hooks are generally made of

- (a) High Carbon steel

(b) Wrought iron

(c) Cast steel

(d) Cast iron

70. Domestic refrigerator working on vapour compression cycle uses the following type of expansion device.

(a) Electrically operated throttling valve

(b) Manually operated valve

(c) Thermostatic valve

(d) Capillary tube

71. Which of the following is a secondary refrigerant, when used above 0°C?

(a) Sodium chloride

(b) Glycol's

(c) Brines

(d) Water

72. Which among the following gases have ability to be repelled by magnetic fields

(a) Oxygen

(b) Nitrogen

(c) Nitrogen dioxide

(d) Nitric oxide

73. Types of corrosion in fresh water of Diesel Engines \_\_\_\_\_

(a) Hot corrosion

(b) Stress

(c) Selective phase corrosion

(d) Bimetallic

74. The coating which is provided on the valve stem of exhaust valves of modern marine diesel engines is of:

(a) Nickel

(b) Stellite

(c) Chromium

(d) Nimonic

75. Which types of gears are used in constant mesh gearbox?

(a) Spur gear

(b) Helical gear

(c) Bevel gear

(d) Worm gear

76. Which among of the following is a common material used for bearing bush?

(a) Inconel

(b) Copper

(c) Aluminium

(d) Gun Metal

77. The type of coupling used to join two shafts whose axes are neither in same straight line nor parallel, but intersect is

(a) Oldham's coupling

(b) Universal coupling

(c) Flexible coupling

(d) Chain coupling

78. Which of the subsequent is not a transmission shaft type?

- (a) Crank shaft
- (b) Counter shaft
- (c) Straight shaft
- (d) Line Shaft

79. The frequency of an alternator at a given RPM is determined by

- (a) Number of turns of wire in the armature coil
- (b) Number of magnetic poles
- (c) Strength of the magnets used
- (d) Output voltage

80. Which is control the maximum and Minimum Speed of the diesel engine?

- (a) FIP
- (b) Governor
- (c) Injector
- (d) Feed Pump

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