

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO

Booklet Serial No. **104417**

Test Booklet Series

**DRAFTSMAN (SOIL CONSERVATION)
OMR Examination - 2025**



Time Allowed: 120 Minutes

Maximum Marks: 120


INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET **DOES NOT** HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. Please note that it is the candidate's responsibility to encode and fill in the Roll Number, Booklet Serial No. and Test Booklet Series Code A, B, C or D carefully and without any omission or discrepancy at the appropriate places in the OMR Answer /Response Sheet. Any omission/discrepancy will render the Response Sheet liable for rejection.
3. You have to enter your Roll Number on the
Test Booklet in the Box provided alongside.
DO NOT write *anything else* on the Test Booklet.

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4. This Test booklet contains 120 items (questions). Each item comprises of four responses (answers). You will select the response which you want to mark on the Answer Sheet/Response Sheet. In case you feel that there is more than one correct response, mark the response which you consider the appropriate. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your responses **ONLY** on the separate Answer /Response Sheet provided. See directions in the Response Sheet.
6. All items carry equal marks.
7. After you have completed filling in all your responses on the Response Sheet and the examination has concluded, you should hand over to the Invigilator **only the Answer /Response Sheet**. You are permitted to take away with you the Test Booklet and **Candidate's Copy of the Response Sheet**.
8. Sheets for rough work are appended in the Test Booklet at the end.
9. While writing Centre Code and Roll No. on the top of the Answer Sheet/Response Sheet in appropriate boxes use **"ONLY BLUE/BLACK BALL POINT PEN"**.
10. Penalty for wrong answers:
THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY THE CANDIDATE IN THE WRITTEN TEST (OBJECTIVE TYPE QUESTIONS PAPERS).
 - (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, ($\frac{1}{4}$) of the marks assigned to that question will be deducted as penalty.
 - (ii) If a candidate gives more than one answer, it will be treated as a wrong answer even if one of the given answers happens to be correct and there will be same penalty as above for that question.
 - (iii) If a question is left blank, i.e., no answer is given by the candidate, there will be no penalty for that question.

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(Set - A)

-  1. The minimum spacing between lines in lettering to maintain clarity is:
- A) Equal to the line thickness
 - B) Half the line thickness
 - C) Twice the line thickness
 - D) 1.5 times the height of lettering
2. Which tool is used for concrete slump testing?
- A) Plumb bob
 - B) Slump cone
 - C) Trowel
 - D) Level tube
3. What is the primary purpose of watershed management?
- A) Building roads
 - B) Cement production
 - C) Urban planning
 - D) Water and soil conservation
4. Terracing helps in:
- A) Increasing slope
 - B) Preventing erosion
 - C) Growing trees
 - D) Harvesting crops
5. What does "plinth area" refer to?
- A) Area of doors
 - B) Carpet area
 - C) Covered area at floor level
 - D) Height of building
6. Which is a micro-irrigation technique?
- A) Drip irrigation
 - B) Canal irrigation
 - C) Flood irrigation
 - D) Lift irrigation

7. Which method is used in plane table surveying to fix a point by two known points?
- A) Radiation
 - B) Resection
 - C) Intersection
 - D) Traversing
8. A block in AutoCAD is:
- A) A layer
 - B) A toolbar
 - C) An area of screen
 - D) A group of objects saved as a single item
9. The true shape of a section is seen when the cutting plane is:
- A) Parallel to the viewing plane
 - B) Inclined to the plane of projection
 - C) Perpendicular to the viewing direction
 - D) At an arbitrary angle
10. Which stone is best suitable for building works?
- A) Sandstone
 - B) Laterite
 - C) Granite
 - D) Marble
11. Welded joints are preferred over riveted joints because:
- A) They are temporary
 - B) They are less aesthetic
 - C) They form a stronger bond
 - D) They require more labour
12. In permanent gully control, which structure is used at the head?
- A) Drop structure
 - B) Toe wall
 - C) Gabion
 - D) Retaining wall

13. Drafting software often used in conservation planning is:
- A) Excel
 - B) AutoCAD
 - C) Photoshop
 - D) Word
14. The unit of measurement for painting work is:
- A) Running meter
 - B) Cubic meter
 - C) Kilogram
 - D) Square meter
15. Percolation tanks are used for:
- A) Power generation
 - B) Flood control
 - C) Groundwater recharge
 - D) Navigation
16. The alidade is used in:
- A) Theodolite surveying
 - B) Plane table surveying
 - C) Chain surveying
 - D) Compass surveying
17. Which factor most affects accuracy of GPS measurement?
- A) Colour of the surface
 - B) Cloud cover
 - C) Number of visible satellites
 - D) Slope angle
18. A polyline is:
- A) Series of connected lines and arcs
 - B) Single circle
 - C) Hatch pattern
 - D) Text

19. A TIN surface in Civil 3D stands for:
- A) Temporary Indexed Network
 - B) Triangulated Irregular Network
 - C) Terrain Indexed Notation
 - D) Tangent Integrated Node
20. Inverted siphon in sewerage is used where:
- A) Pressure is high
 - B) Open channel flow is maintained
 - C) Stormwater is collected
 - D) Sewer crosses a valley or obstruction
21. Which of the following is used to construct an ellipse?
- A) Two-point method
 - B) Parabola method
 - C) Rectangle method
 - D) Concentric circles method
22. Which is not part of RCC elements?
- A) Lintel
 - B) Column
 - C) Beam
 - D) Scaffolding
23. Which type of drawing shows terrain elevation?
- A) Plan view
 - B) Contour map
 - C) Floor plan
 - D) Sectional view
24. The volume of earthwork in contour bunding is estimated from:
- A) Area formula
 - B) Trapezoidal formula
 - C) Cross-sectional drawings
 - D) Elevation points

25. For slope $>30\%$, the preferred conservation practice is:
- A) Gabions
 - B) Trench
 - C) Bench terracing
 - D) Retaining walls
26. When an additional item of work is required beyond original scope, the estimate type is:
- A) Revised
 - B) Plinth area
 - C) Technical sanction
 - D) Supplementary
27. What is the purpose of a stilling basin in hydraulic structures?
- A) Increase pressure
 - B) Reduce silt
 - C) Dissipate energy
 - D) Store water
28. "Consumptive use" of water includes:
- A) Runoff + infiltration
 - B) Evaporation + transpiration
 - C) Water used in turbines
 - D) Flow through weirs
29. A bearing is measured in:
- A) Degrees
 - B) Meters
 - C) Radians
 - D) Hours
30. What is the sag correction in chaining?
- A) Always positive
 - B) Always negative
 - C) May be zero
 - D) Ignored for accuracy

31. In Civil 3D, which feature helps create terrain surfaces?
- A) Assembly
 - B) Parcel
 - C) Profile
 - D) Surface
32. Which file type is used to save drawing templates in AutoCAD?
- A) .DWG
 - B) .DWT
 - C) .DXF
 - D) .DWF
33. The function of a grit chamber in STP is to:
- A) Settle heavy inorganic solids
 - B) Remove suspended organic matter
 - C) Kill bacteria
 - D) Filter fine particles
34. In modern STPs, tertiary treatment aims to:
- A) Remove large solids
 - B) Improve appearance
 - C) Disinfect and polish effluent
 - D) Remove floating oil
35. In isometric projection, the angle between the projection axes is:
- A) 45°
 - B) 30°
 - C) 60°
 - D) 90°
36. Which material is used in damp-proofing?
- A) Bitumen
 - B) Gypsum
 - C) Clay
 - D) Cement mortar

37. What is a gabion structure made from?
- A) Bricks
 - B) Soil
 - C) Bamboo
 - D) Metal mesh and stones
38. A watershed is an area:
- A) Around a river only
 - B) With natural vegetation
 - C) That drains into a common outlet
 - D) Used for mining
39. Sheet erosion removes soil:
- A) Uniformly across the surface
 - B) In small gullies
 - C) In patches
 - D) In deep cuts
40. A building setback is:
- A) A failure
 - B) Wall thickness
 - C) Internal room
 - D) Minimum distance from plot boundary
41. The Annual Rental Value method is mostly used for:
- A) Industrial property
 - B) Residential colonies
 - C) Municipal tax assessment
 - D) Land only
42. A barrage is mainly constructed to:
- A) Generate electricity
 - B) Control floods
 - C) Store water
 - D) Divert water

43. What is dead storage in a reservoir?
- A) Storage for drinking water
 - B) Water below the outlet level
 - C) Water above dam crest
 - D) Silt storage
44. GPS stands for:
- A) General Positioning Survey
 - B) Global Pointing System
 - C) Geographical Point Service
 - D) Global Positioning System
45. The instrument station in total station is known as:
- A) Occupied station
 - B) Back station
 - C) Bench mark
 - D) Fore station
46. A lemniscate curve is used in:
- A) Canal alignment
 - B) High-speed railway curves
 - C) Road interchanges
 - D) Tunnel construction
47. Model Space in AutoCAD is used to:
- A) Print drawing
 - B) Manage layouts
 - C) Draw actual designs
 - D) Add title block
48. Which of the following is not a type of coordinate system in GIS?
- A) UTM
 - B) Geographic
 - C) Cartesian
 - D) Orthogonal

49. The term "sewer" refers to:
- A) Clean water pipe
 - B) Electrical conduit
 - C) Wastewater pipe
 - D) Gas pipe
50. In a two-pipe house drainage system, the waste pipe discharges:
- A) Into gully trap directly
 - B) Into soil pipe
 - C) Into rainwater drain
 - D) Into inspection chamber
51. Which symbol is used to represent earthwork in agricultural engineering drawings?
- A) A circle with a diagonal
 - B) A cross-hatched square
 - C) Triangular mark
 - D) Wavy horizontal lines
52. Which of the following is used to draw smooth curves through a series of points?
- A) Compass
 - B) T-square
 - C) French curve
 - D) Set square
53. Which test is conducted to determine concrete workability?
- A) Cube test
 - B) Slump test
 - C) Impact test
 - D) Soundness test
54. The minimum grade of concrete for RCC work as per IS:456-2000 is:
- A) M10
 - B) M15
 - C) M20
 - D) M25

55. In cross-sectional drawing, the vertical scale is sometimes exaggerated for:
- A) Clarity
 - B) Aesthetics
 - C) Uniformity
 - D) Budget
56. Effective slope of a terrace is determined by:
- A) Soil pH
 - B) Rainfall
 - C) Length of slope and vertical interval
 - D) Water table
57. What does the duty of water mean?
- A) Height of water fall
 - B) Pressure of water
 - C) Speed of water
 - D) Area irrigated per unit discharge
58. In hydrology, what is the rational method used for?
- A) Calculating peak discharge
 - B) Estimating soil erosion
 - C) Measuring canal flow
 - D) Sizing irrigation pipes
59. The HI method is used in:
- A) Plane tabling
 - B) Levelling
 - C) Curves setting
 - D) Compass traversing
60. The most accurate method of plane table surveying is:
- A) Radiation
 - B) Traversing
 - C) Resection
 - D) Intersection

61. In 3D modelling, the Revolve command is used to:
- A) Rotate the viewport
 - B) Sweep a shape around an axis
 - C) Move objects
 - D) Copy an object
62. The most common type of joint used in stoneware pipes is:
- A) Spigot and socket joint
 - B) Flanged joint
 - C) Butt joint
 - D) Expansion joint
63. The minimum diameter of a self-cleansing sewer should be:
- A) 100 mm
 - B) 150 mm
 - C) 250 mm
 - D) 300 mm
64. In orthographic projection, the top view is projected onto the:
- A) Vertical plane
 - B) Isometric plane
 - C) Profile plane
 - D) Horizontal plane
65. What is used in termite-proofing?
- A) Kerosene
 - B) Chlorpyrifos
 - C) Turpentine
 - D) Wax
66. Composite masonry includes:
- A) Lime and sand
 - B) Bricks and cement
 - C) Stone and bricks together
 - D) Timber and metal

67. Contour lines connect points of equal:
- A) Slope
 - B) Distance
 - C) Rainfall
 - D) Elevation
68. A cross-section of a terrace is drafted to show:
- A) Slope, width, and riser
 - B) Rainfall
 - C) Soil texture
 - D) Concrete details
69. In drafting, a layout drawing shows:
- A) Construction details
 - B) Longitudinal slope
 - C) General arrangement
 - D) Foundation depth
70. Gully depth measurements are used to calculate:
- A) Rainfall
 - B) Slope curvature
 - C) Fertility
 - D) Sediment loss
71. Rate analysis involves:
- A) Breakdown of labour, material, and overhead costs
 - B) Time schedule
 - C) Quantity only
 - D) Design aesthetics
72. What is a "sluice gate" used for?
- A) Silt deposition
 - B) Water discharge control
 - C) Water aeration
 - D) Measuring temperature

73. A canal drop is constructed to:

- A) Store water
- B) Reduce erosion
- C) Control seepage
- D) Lower canal bed level

74. The angle between the magnetic meridian and the line surveyed is called:

- A) Bearing
- B) Declination
- C) Azimuth
- D) Dip

75. The command LTSCALE affects:

- A) Circle radius
- B) Text alignment
- C) Line type scale
- D) Layer transparency

76. The command to export AutoCAD drawing to GIS-compatible format is:

- A) EXPORTGIS
- B) MAPEXPORT
- C) DWFEXPORT
- D) GISEXPORT

77. In sewage treatment, BOD stands for:

- A) Biological Oxygen Demand
- B) Biochemical Organic Demand
- C) Basic Organic Discharge
- D) Bacterial Oxidation Demand

78. Gabions must be anchored to prevent:

- A) Overheating
- B) Manual theft
- C) Growth of weeds
- D) Collapse during high flow

79. Which drafting scale is best for gully layout?
- A) 1:50
 - B) 1:500
 - C) 1:5000
 - D) 1:20000
80. The term "gully plugging" refers to:
- A) Reducing width
 - B) Preventing flow
 - C) Blocking gully head
 - D) Growing trees
81. Efflorescence in bricks is caused due to presence of:
- A) Iron oxide
 - B) Calcium carbonate
 - C) Silica
 - D) Alkaline salts
82. The axis of a cone is inclined to the horizontal plane and parallel to the vertical plane. The conic section will appear as an ellipse when viewed in the:
- A) Top view
 - B) Front view
 - C) Side view
 - D) Auxiliary view
83. Steel used in RCC is mainly for:
- A) Reducing weight
 - B) Thermal insulation
 - C) Withstanding tensile stress
 - D) Surface finish
84. Cross-sectional drawing of terrace includes:
- A) Only length
 - B) Labels only
 - C) Colour coding
 - D) Width and depth

85. Terraces are constructed:
- A) Parallel to the slope
 - B) Perpendicular to the slope
 - C) Across the slope
 - D) Randomly
86. Underpinning is used for:
- A) Excavation support
 - B) Foundation strengthening
 - C) Concrete curing
 - D) Damp prevention
87. Which instrument is used to measure contour gradients?
- A) Clinometer
 - B) Vernier scale
 - C) Planimeter
 - D) Dumpy level
88. Check dams are spaced based on:
- A) Gully gradient
 - B) Width of gully
 - C) Rainfall
 - D) Crop season
89. In valuation, depreciation refers to:
- A) Increase in value
 - B) Cost of repair
 - C) Decrease in value due to age/use
 - D) Insurance premium
90. A gravity dam resists forces by:
- A) Its own weight
 - B) Tension
 - C) Flexibility
 - D) Expansion joints

91. Aqueducts in canal systems are used to:
- A) Cross roads
 - B) Cross drainage channels over canals
 - C) Carry canal over natural drains
 - D) Regulate water levels
92. An angle greater than 180° and less than 360° is called:
- A) Whole circle bearing
 - B) Horizontal angle
 - C) Internal angle
 - D) Reflex angle
93. Extrude is used in 3D modelling to:
- A) Stretch a 2D object into 3D
 - B) Flatten a surface
 - C) Rotate a shape
 - D) Create layers
94. The first chamber in a septic tank is used for:
- A) Disinfection
 - B) Sludge digestion
 - C) Filtration
 - D) Sedimentation
95. In Civil 3D, profiles represent:
- A) Points
 - B) Vertical section of alignment
 - C) Layout viewports
 - D) Cross-sections
96. The length of a Gunter's chain is:
- A) 66 ft
 - B) 30 m
 - C) 20 m
 - D) 33 m

97. In AutoCAD, ViewCube is used to:
- A) Create objects
 - B) Switch between model/layout
 - C) Navigate 3D views
 - D) Plot drawings
98. Agronomic measures prevent erosion by:
- A) Slowing wind speed
 - B) Increasing infiltration
 - C) Improving aesthetics
 - D) Raising temperature
99. For steep terrain, the most effective erosion control is:
- A) Check dams
 - B) Strip cropping
 - C) Vegetation alone
 - D) Bench terracing
100. The unit of measurement for brickwork is:
- A) Cubic meter
 - B) Square meter
 - C) Running meter
 - D) Kilogram
101. Hydrographs represent:
- A) Crop water use
 - B) Rainfall vs. temperature
 - C) Stream flow over time
 - D) Soil profile
102. A total station can measure distances using:
- A) Magnetic field
 - B) Refraction index
 - C) Tape
 - D) EDM

103. The baffle wall in a septic tank:

- A) Controls gas flow
- B) Prevents scum from flowing
- C) Aids chlorination
- D) Divides inlet and outlet

104. A properly designed terrace avoids:

- A) Waterlogging and overtopping
- B) Flooding
- C) Cracks
- D) Sediment

105. Which of the following is included in a detailed estimate?


- A) Only abstract cost
- B) Lump sum provision
- C) Item-wise quantity and rate calculations
- D) Only labour cost

106. Watershed boundaries are marked based on:

- A) Road networks
- B) Soil colour
- C) Vegetation
- D) Topographic divides

107. Scrap value in valuation refers to:

- A) Final value after demolition
- B) Taxable value
- C) Market resale value
- D) Repair cost

 108. What is the function of energy dissipators in spillways?

- A) Increase velocity
- B) Measure flow
- C) Prevent downstream erosion
- D) Increase head

109. Strip cropping is aligned:

- A) Along the slope
- B) Across the slope
- C) In circles
- D) Zig-zag

110. In CAD software, layers are used to:

- A) Create blocks
- B) Rotate lines
- C) Make 3D objects
- D) Organize drawings

111. Which instrument is used to measure rainfall?

- A) Anemometer
- B) Hygrometer
- C) Rain gauge
- D) Barometer

112. Which is a temporary gully control structure?

- A) Brushwood dam
- B) Stone pitching
- C) RCC wall
- D) Gabion wall

113. Which of the following acts as an admixture in concrete?

- A) Bitumen
- B) Fly ash
- C) Sand
- D) Timber

114. In theodolite, the line of collimation error affects:

- A) Length measurement
- B) Area calculation
- C) Vertical angles
- D) Horizontal angles

115. What type of erosion forms deep channels?

- A) Wind erosion
- B) Sheet erosion
- C) Gully erosion
- D) Splash erosion

116. Which part of a door holds it to the wall?

- A) Frame
- B) Panel
- C) Shutter
- D) Architrave

117. Which line type is used to represent visible edges in a drawing?

- A) Centre line
- B) Continuous thick line
- C) Hidden line
- D) Chain line

118. The load-carrying member in steel roof trusses is:

- A) Gutter
- B) Gusset plate
- C) Ridge
- D) Rafter

119. In conic sections, a parabola is formed when a plane intersects the cone:

- A) Perpendicularly to its base
- B) Parallel to the base
- C) At an angle equal to the generator
- D) Through the apex

120. In GIS, attribute data is:

- A) Spatial location
 - B) Image pixels
 - C) Descriptive information about spatial features
 - D) Coordinates
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ROUGH WORK



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