

16P/289/22

(To be filled up by the candidate by blue/black ball-point pen)

Roll No.

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Roll No. (Write the digits in words) **code No (355)**

Serial No. of OMR Answer Sheet **(2016)**

Day and Date **(2016)** (Signature of Invigilator)

INSTRUCTIONS TO CANDIDATES

(Use only blue/black ball-point pen in the space above and on both sides of the Answer Sheet)

1. Within 10 minutes of the issue of the Question Booklet, check the Question Booklet to ensure that it contains all the pages in correct sequence and that no page/question is missing. In case of faulty Question Booklet bring it to the notice of the Superintendent/Invigilators immediately to obtain a fresh Question Booklet.
2. Do not bring any loose paper, written or blank, inside the Examination Hall **except the Admit Card without its envelope.**
3. A separate Answer Sheet is given. It should not be folded or mutilated. A second Answer Sheet shall not be provided. Only the Answer Sheet will be evaluated.
4. Write your Roll Number and Serial Number of the Answer Sheet by pen in the space provided above.
5. On the front page of the Answer Sheet, write by pen your Roll Number in the space provided at the top and by darkening the circles at the bottom. Also, wherever applicable, write the Question Booklet Number and the Set Number in appropriate places.
6. No overwriting is allowed in the entries of Roll No., Question Booklet no. and Set no. (if any) on OMR sheet and Roll No. and OMR sheet no. on the Question Booklet.
7. Any change in the aforesaid entries is to be verified by the invigilator, otherwise it will be taken as unfair means.
8. Each question in this Booklet is followed by four alternative answers. For each question, you are to record the correct option on the Answer Sheet by darkening the appropriate circle in the corresponding row of the Answer Sheet, by pen as mentioned in the guidelines given on the first page of the Answer Sheet.
9. For each question, darken only one circle on the Answer Sheet. If you darken more than one circle or darken a circle partially, the answer will be treated as incorrect.
10. Note that the answer once filled in ink cannot be changed. If you do not wish to attempt a question, leave all the circles in the corresponding row blank (such question will be awarded zero marks).
11. For rough work, use the inner back page of the title cover and the blank page at the end of this Booklet.
12. Deposit only OMR Answer Sheet at the end of the Test.
13. You are not permitted to leave the Examination Hall at the end of the Test.
14. If a candidate attempts to use any form of unfair means, he/she shall be liable to such punishment as the University may determine and impose on him/her.

Total No. of Printed Pages : 32

[उपर्युक्त निर्देश हिन्दी में अन्तिम आवरण पृष्ठ पर दिये गए हैं।]

16P/289/22

ROUGH WORK

रफ़ कार्य

16P/289/22

No. of Questions : 120

Time : 2 Hours

Full Marks : 360

Note : (1) Attempt as many questions as you can. Each question carries **3 (Three)** marks. **One mark will be deducted for each incorrect answer. Zero** mark will be awarded for each unattempted question.

(2) If more than one alternative answers seem to be approximate to the correct answer, choose the closest one.

01. When a canal is carried over a natural drain, at crossing, the structure provided is called :

- | | |
|-------------------|--------------------|
| (1) Siphon | (2) Aqueduct |
| (3) Super passage | (4) Level crossing |

02. A cross regulator is provided on a main canal :

- (1) To minimize the amount of silt entering the branch canal.
- (2) To let maximum silt is carried into the branch canal.
- (3) For no specific purpose.
- (4) To carry the canal across the drain.

03. A plot between rainfall intensity versus time is called :

- | | |
|----------------|----------------|
| (1) Hydrograph | (2) Mass curve |
| (3) Hyetograph | (4) Isohyet |

04. Isobaths maps indicate :

- (1) Area affected by high water table problems
- (2) Flow of water
- (3) Extent of salinity
- (4) Amount of ground water

05. In well drained soil, the useful soil moisture for plant growth essentially comes from :

- (1) Gravity water
- (2) Capillary water
- (3) Hygroscopic water
- (4) Free water

06. General assumption made to study the mechanics of sediment transport is :

- (1) Soil is incoherent ($C=0$)
- (2) Soil is coherent
- (3) $C > 1$
- (4) $C = 1$

07. Hydrologic soil group A stands for :

- (1) Low runoff potential
- (2) Moderately high runoff potential
- (3) Moderately low runoff potential
- (4) High runoff potential

08. From the hydraulic efficiency point of view, the most efficient cross-section of an open channel is :
- (1) Semi circular (2) Parabolic
(3) Trapezoidal (4) Rectangular
09. The Thiessen polygon is :
- (1) a polygon obtained by joining adjoining raingauge stations
(2) a representative area used for weighing the *observed station* precipitation
(3) an area used in the construction of depth-area curves
(4) the descriptive term for the shape of the hydrograph
10. The volume of water that can be extracted by force of gravity from a unit volume of aquifer material is called :
- (1) Specific retention (2) Specific yield
(3) **Specific gravity** (4) **Specific capacity**
11. If the discharge of drainage canal is 1000 liter/sec and drainage area is 360 hectares, the drainage coefficient will be :
- (1) 2.4 cm (2) 0.24 cm (3) 24 cm (4) 4.2 cm

12. Leakage factor has the dimensions of :

- | | |
|--------------|----------------|
| (1) Time | (2) Length |
| (3) Velocity | (4) Resistance |

13. A practical method of reducing sheet erosion from sloping lands is :

- (1) Keeping the land fallow
- (2) Farming on contour strips
- (3) Construction of small reservoirs
- (4) Using plastic sheet cover

14. A critical condition of flow :

- (1) Specific energy is minimum
- (2) Viscous force is minimum
- (3) Specific energy is maximum
- (4) Total force is maximum

15. If the diameter of a pipe is halved, flow of water in it experiences the increase in the head loss due to friction :

- | | |
|----------------|-------------------|
| (1) Two times | (2) Ten times |
| (3) Four times | (4) Sixteen times |

16. Hydraulic conductivity is the proportionality constant in :

- | | |
|-------------------------|------------------------|
| (1) Bernauli's equation | (2) Darcy's equation |
| (3) Rational formula | (4) Laplace's equation |

17. Froude number is the ratio of the :

- (1) Inertial force to the shear force
- (2) Inertial force to the viscous force
- (3) Inertial force to the gravitational force
- (4) Viscous force to the gravitational force

18. Flow in an irrigation channel is considered as :

- | | |
|----------------------|--------------------|
| (1) Gradually varied | (2) Rapidly varied |
| (3) Spatially varied | (4) uniform |

19. The velocity head in the case of fluid flow is the :

- (1) Kinetic energy per unit area
- (2) Kinetic energy per unit flow area
- (3) Kinetic energy per unit weight
- (4) Kinetic energy per unit time

20. If the electrical conductivity of irrigation and drainage water is 0.2 mmhos/cm and 0.4 mmhos/cm respectively, the leaching requirement will be equal to :
- (1) 80 % (2) 40 % (3) 50 % (4) 20 %
21. 10 cm of irrigation is applied to a field. 1 cm goes as runoff loss and 2 cm goes as percolation loss. The application efficiency is :
- (1) 90 % (2) 60 % (3) 80 % (4) 70%
22. A 80 % dependable rainfall means :
- (1) Magnitude of rainfall equal to 80 % of normal
- (2) Chances of normal rainfall are 80 %
- (3) Rainfall will be equal to or more than the given value 80 % of the time
- (4) Rainfall will be less than the given value 80 % of the time
23. The cumulative infiltration equation is $I = 2 t^{0.5}$ (I in cm, t in minutes). The instantaneous infiltration rate at 4 minutes from start will be :
- (1) 0.1 cm/min (2) 0.5 cm/min
- (3) 1.0 cm/min (4) 1.5 cm/min

24. The normal cut fill ratio in a land leveling operation is kept about :
- (1) 0.7 (2) 1.0 (3) 1.3 (4) 2.0
25. Water horse power of a centrifugal pump of 10 liter/sec capacity and 38 meter total head will be equal to :
- (1) 3 (2) 5 (3) 4 (4) 6
26. Irrigation water having an SAR value of 20 is called as :
- (1) very high sodium water (2) high sodium water
(3) medium sodium water (4) low sodium water
27. Venturi used for doing fertigation in micro irrigation system working on the following theorem :
- (1) Kennedy's (2) Khosla's
(3) Bernoulli (4) Jones
28. The discharge rates of drip emitters usually ranges from :
- (1) 2-10 liters/day (2) 2-10 liters/h
(3) 2-10 liters/min (4) 2-10 liters/sec

29. The safe entrance velocity through a well screen is :

- (1) 0.3 mm/s (2) 3 mm/s (3) 30 mm/s (4) 300 mm/s

30. The movement of soil particles having sizes in the range of 0.05 to 0.5 mm through a series of benches is known as

- (1) Surface creep (2) Surface transportation
(3) Saltation (4) Suspension

31. The numerical value of hydraulic exponent for critical flow computation in a rectangular channel is :

- (1) 3 (2) Zero (3) 1 (4) 2

32. An 'S' curve in hydrology is obtained by summing :

- (1) Rainfall (2) runoff
(3) Snowmelts (4) evaporation

33. A drop spillway is used of :

- (1) Erosion control (2) Flow measurement
(3) Flow diversion (4) Flow regulation

34. Curve number represents :

- | | |
|-----------------------|-------------------------|
| (1) Rainfall property | (2) Watershed feature |
| (3) Runoff trend | (4) Stream flow feature |

35. An aquifer bounded by a partially pervious layer and below by a layer that is either impervious or partially pervious is called :

- | | |
|------------------------|---------------------------|
| (1) Confine aquifer | (2) Semi confined aquifer |
| (3) Unconfined aquifer | (4) Perched aquifer |

36. Casagrande's apparatus is used to determine :

- | | |
|-------------------|----------------------|
| (1) Liquid limit | (2) Shrinkage limit |
| (3) Plastic limit | (4) Plasticity index |

37. Pumps are selected based on :

- | | |
|-----------------------|-------------------------------|
| (1) Pump diameter | (2) Pump characteristic curve |
| (3) Pump design curve | (4) Well curve |

38. Crop factor is the ratio between :

- (1) Pan evaporation and PET
- (2) Reference crop evapotranspiration and actual crop evapotranspiration
- (3) PET and reference crop evapotranspiration
- (4) Actual crop evapotranspiration and crop water requirement

39. Canopy factor is the ratio between :

- (1) Canopy area and land area
- (2) Canopy area and row spacing
- (3) Plant height and plant area
- (4) Canopy temperature and ambient temperature

40. Precise land leveling can be done using a :

- (1) Wooden float
- (2) Scraper blade
- (3) Singh patella
- (4) Laser land leveler

41. A foot valve is used in a centrifugal pumping system so as to :

- (1) Keep it primed
- (2) Measure the flow
- (3) Give strength to its foot
- (4) Control flow of water in to the pumping system

42. Mulching is used for :

- (1) Ensuring good germination
- (2) Conserving moisture
- (3) Preventing soil from compaction
- (4) Increasing irrigation water application efficiency

43. Bioremediation is a technique of :
- (1) Removing microorganism from food items
 - (2) Improving water quality using biological methods
 - (3) Meditation in agricultural fields
 - (4) Removing weeds using biological means
44. Ground water contamination from non point source pollution is caused by :
- (1) Leaching of nutrients and pesticides
 - (2) Ground water exploitation
 - (3) Aquifer rock weathering
 - (4) Climate change
45. SRI is a technique of :
- (1) Honouring plant verities
 - (2) Crop cultivation in strict regulatory instructions
 - (3) Screening for resistance to moisture stress in plants
 - (4) Growing rice
46. Gypsum can be used to reclaim :
- | | |
|-----------------------|-----------------|
| (1) Alkali soils | (2) Acidic soil |
| (3) Sodic saline soil | (4) None |

47. The conjunctive use of water in a basin means :

- (1) Combined use of the water for irrigation and hydro power generation
- (2) Use of water by co-operative farmers
- (3) Use of water for irrigating both Rabi and Khariff crops
- (4) Combined use of surface and ground water resources

48. In Rational formula, $Q = CiA$, i stands for :

- (1) Intensity of rainfall
- (2) Hydraulic gradient
- (3) Runoff coefficient
- (4) Mean intensity of rainfall for a duration equal to time of concentration (t_c)

49. When two centrifugal pumps are operated in series, the discharge

- (1) increases
- (2) decreases
- (3) Remains constant
- (4) None of the above

50. Pressure plate apparatus is used for the measurement of soil moisture tension up to :

- (1) 10 bars
- (2) 15 bars
- (3) 50 bars
- (4) 51 bars

51. Particle density and bulk density of a soil are 2.8 g/cm^3 and 1.4 g/cm^3 , its void ratio will be
- (1) 1.0 (2) 0.5 (3) 4.2 (4) 2.4
52. Hydraulic drop takes place when the flow changes :
- (1) From sub critical to critical
(2) From critical to super critical
(3) From super critical to sub critical
(4) From sub critical to super critical
53. Surge irrigation refers to :
- (1) Supplying total water quickly and in one go
(2) Supplying water in several wetting and drying cycles
(3) Quickly flushing out standing water from field
(4) Supplying water slowly but continuously
54. Cipolettie weir side slopes of :
- (1) 1 : 4 (2) 4 : 1 (3) 1 : 2 (4) 2 : 1
55. Maximum energy use in irrigated crop cultivation is in :
- (1) Tillage. (2) Irrigation
(3) Harvesting (4) Sowing/planting

56. The fluid that do not undergo strain rates proportional to the applied shear stress are called :

- (1) Newtonian fluids
- (2) Non Newtonian fluids
- (3) Compressible fluids
- (4) Non compressible fluids

57. If V is the velocity and I is the hydraulic gradient then in the relation $V = KI$, K has the dimensions of :

- (1) LT^{-1}
- (2) T^{-1}
- (3) L^2T^2
- (4) Dimensionless

58. Warabandi, Shejpali and Osrabandi are the systems of rotational canal water distribution to achieve :

- (1) Need based irrigation
- (2) Better uniformity in water application
- (3) Better equity in water distribution
- (4) Better recovery of water charges

59. The latest method for the estimation of PET (potential evapotranspiration) is :

- (1) Penman's Equation
- (2) Blaneycriddle formula
- (3) Class A pan evaporation
- (4) Penman Monteith Equation

60. Practical methods of reducing sheet erosion from sloping lands is :

- (1) Keeping the land fallow
- (2) Farming on contour strips
- (3) Construction of small reservoirs
- (4) Using plastic sheet covers

61. Mathematical equation used to describe saturated-unsaturated flow of water in drip irrigation :

- (1) Richard equation
- (2) Continuity equation
- (3) Bernoulli's theorem
- (4) Laplace equation

62. Which one of the following defines aridity index (AI)-

- (1) $AI = \frac{PET - AET}{PET} \times 100$
- (2) $AI = \frac{PET}{AET} \times 100$
- (3) $AI = \frac{AET}{PET} \times 100$
- (4) $AI = \frac{AET - PET}{AET} \times 100$

63. For vertical cut, the width of bench terrace is :

- (1) $W = (D.S)/100$
- (2) $W = (100S)/D$
- (3) $W = 100/S$
- (4) $W = S/100$

68. Area under a hydrograph represents :

- | | |
|-----------------------|----------------------------|
| (1) Volume of runoff | (2) Volumes of rainfall |
| (3) Area of watershed | (4) Average rate of runoff |

69. Erodibility of a soil depends upon :

- (1) Soil moisture
- (2) Mechanical composition of soil
- (3) Soil structure
- (4) Hydraulic conductivity

70. The volume of water that can be extracted by force of gravity from a **unit volume of aquifer** material is called :

- | | |
|------------------------|-----------------------|
| (1) Specific retention | (2) Specific yield |
| (3) Specific gravity | (4) Specific capacity |

71. Erosivity refers to the potential ability of :

- (1) Soil to get erode
- (2) **Rain drops** and blowing wind to erode the particles
- (3) Wind to erode particles
- (4) Rain to erode particles

72. Effective rainfall in irrigation planning is equal to :

- (1) Total rainfall
- (2) Rainfall – runoff
- (3) Rain water stored in root zone
- (4) Rainfall + runoff

73. The unit hydrograph may be obtained by dividing the ordinates of the direct runoff hydrograph of a storm :

- (1) Direct runoff volume
- (2) Storm duration
- (3) Duration of unit hydrograph
- (4) Total runoff-volume

74. Rain drops are spherical in shape because of :

- (1) Surface tension
- (2) Capillary
- (3) Acceleration due to gravity
- (4) Cohesion and adhesion

75. Ground water recharge by surface flooding is primarily governed by :

- (1) Infiltration rate
- (2) Aquifer transmissibility
- (3) Aquifer storage coefficient
- (4) Saturated hydraulic conductivity

76. Rain gun is a term used to describe :

- | | |
|------------------------------|--------------------------------|
| (1) Gun usable in rains | (2) Dropping of guns like rain |
| (3) Gun that fires like rain | (4) Huge sprinkler head |

77. IW/CPE ratio is used for :

- | | |
|----------------------------|-----------------------------------|
| (1) Scheduling irrigations | (2) Scheduling fertigation |
| (3) Scheduling chemigation | (4) Scheduling tillage operations |

78. Vertical entry into the soil through soil surface may be defined as :

- | | |
|-----------------------|----------------------|
| (1) seepage rate | (2) percolation rate |
| (3) infiltration rate | (4) evaporation rate |

79. Lysimeter is device used to measure the :

- | | |
|-----------------------------------|------------------------|
| (1) Infiltration capacity of soil | (2) Evapotranspiration |
| (3) Evaporation | (4) Transpiration |

80. Which type of soil has maximum volume of pore spaces :

- | | |
|----------|----------|
| (1) Clay | (2) Sand |
| (3) Loam | (4) Silt |

81. Annual maximum floods are most likely to fit in :

- (1) Normal distribution
- (2) Gamma distribution
- (3) Gumbel distribution
- (4) Beta distribution

82. Cyclonic precipitation is due to :

- (1) orographic lifting
- (2) ocean nearby
- (3) convergence of storms towards a low pressure belt
- (4) divergence of storms

83. Soil structure refers to :

- (1) Arrangement of soil particles
- (2) Size of soil particles
- (3) Colour of soil particles
- (4) Shape of soil particles

84. Matric potential is the result of phenomena of :

- (1) Adhesion
- (2) capillary
- (3) Both (1) and (2) above
- (4) None of the above

85. Readily available soil moisture to plants in the soil profile (root zone) is approximately equal to :
- (1) 100 percent of available water holding capacity
 - (2) 75 percent of available water holding capacity
 - (3) 50 percent of available water holding capacity
 - (4) 25 percent of available water holding capacity
86. An instrument used for measurement of saturated hydraulic conductivity of soils is :
- (1) Permeameter
 - (2) Hydrometer
 - (3) Conductivity meter
 - (4) Manometer
87. Combined use of surface and ground water in an irrigation project is known as :
- (1) Integrated use
 - (2) Consumptive use
 - (3) Conjunctive use
 - (4) Bottom up use
88. PMKSY stands for :
- (1) Prime Minister Kisan Sewa Yojna
 - (2) Prime Minister Kisan Sahyog Yojna
 - (3) Prime Minister Krishi Sinchai Yojna
 - (4) Prime Minister Kisan Savings Yojna

89. Confined aquifer is also known as :

- (1) Water table aquifer (2) Artesian aquifer
- (3) Semi-confined aquifer (4) Perched aquifer

90. The simplex procedure is used to solve general maximization problem in :

- (1) Dynamic programming (2) Linear programming
- (3) Integer programming (4) Analog simulation

91. Slop length affects the erosion mainly by :

- (1) Increasing flow velocity for shorter duration
- (2) Decreasing flow velocity for shorter duration
- (3) Increasing flow velocity for longer duration
- (4) None of the above

92. A greater soil erosion is observed in case of :

- (1) Soil surface covered by fruit orchards
- (2) Soil surface under grass cover
- (3) Soil under forest cover
- (4) Soil under cultivated seasonal crop

93. A field measuring 30 hectares, 40 cm of water was stored in the root zone when 6 cumec of water was applied for 8 hours. What will be application efficiency ?

- (1) 70 % (2) 75 % (3) 69.44 % (4) 80 %

94. Sink term (S_z) in this equation $\left(\frac{\partial \theta}{\partial t} = \frac{\partial v_z}{\partial z} - S_z \right)$ represents :

- (1) Amount of solutes present in the soil for root water uptake
- (2) Water movement in the soil
- (3) Water lost through drainage and deep percolation
- (4) Water extraction by plant roots

95. In a rectangular channel section, the critical depth (h_c) is given by :

$$(1) \quad h_c = \sqrt{\frac{Q^2}{gb^2}}$$

$$(2) \quad h_c = 3\sqrt{\frac{Q^2}{b^2}}$$

$$(3) \quad h_c = 3\sqrt{\frac{Q^2}{gb^2}}$$

$$(4) \quad h_c = 3\sqrt{\frac{Q^2}{b^2}}$$

96. In Rational formula, $Q = CiA$, i standards for :

- (1) Intensity of rainfall
- (2) Hydraulic gradient
- (3) Runoff coefficient
- (4) Mean intensity of rainfall for a duration equal to time of concentration (t_c)

97. Time-domain reflectometry (TDR) is the method of monitoring :

- (1) Soil moisture
- (2) Vapour pressure
- (3) Salt concentration
- (4) Solar radiation

98. The capillary fringe also called :

- (1) suspended water
- (2) vadose water
- (3) Gravity water
- (4) All of the above

99. Removal of a thin and fairly uniform layer of the soil from the land surface by runoff water is called :

- (1) Torrent erosion
- (2) Sheet erosion
- (3) Glacial erosion
- (4) Geologic erosion

100. Top bench terraces are suitable for areas receiving :

- (1) medium uniformly distributed rainfall with medium permeable deep soils
- (2) Heavy rainfall with permeable deep soils
- (3) Low rainfall with permeable deep soil
- (4) Very high rainfall with permeable shallow soils

101. Infiltration rate in a sandy soil is :

- (1) More than that of clay soil
- (2) less than that of clay soil
- (3) equal to clay soil
- (4) equal to zero

102. Pump stand is a :

- (1) concrete base of a pump
- (2) water entry point of underground pipeline
- (3) platform for standing before a pump
- (4) non-functional pump

103. Velocity area method is used to estimate :

- (1) velocity of flow
- (2) area of flow
- (3) discharge of flow
- (4) None of the above

104. Scale of pH varies from

- (1) 0-1
- (2) 0-14
- (3) 0-10
- (4) 0-7

105. The green house effect is caused by an excess of :

- (1) Carbon dioxide
- (2) Carbon monoxide
- (3) Carbon tetrachloride
- (4) None of the above

106. Diaphragm pumps are used to lift :

- (1) Muddy water from shallow depths
- (2) Muddy water from large lifts
- (3) Clear water from tube wells
- (4) Oil from deep wells

107. Infrared thermometer gun is used for :

- (1) Scaring away animals
- (2) Measuring soil temperature
- (3) Measuring canopy temperature
- (4) Measuring fraction of infrared light

108. Variable rate applicators are important tools used in :

- (1) Relay cropping
- (2) Precision farming
- (3) Mixed farming
- (4) Creating variability in the field

109. What for the cocopeat, perlite and vermiculite mixtures are used :

- (1) A substitute for soil
- (2) As fertilizers
- (3) As plant protection chemicals
- (4) As organic manure

110. With each cycle of surge irrigation, infiltration rate of soil :

- (1) Remains constant
- (2) Increases
- (3) Decreases
- (4) has no relation

111. A Gypsum block is used as a :
- (1) Soil amendment
 - (2) soil moisture measurement device
 - (3) a device to stop flow
 - (4) a device to compact the soils
112. The velocity head in the case of fluid flow is the :
- (1) Kinetic energy per unit volume
 - (2) Kinetic energy per unit weight
 - (3) Kinetic energy per unit flow area
 - (4) Kinetic energy per unit drop in water surface
113. The normal cut fill ratio in a land leveling operation is kept about :
- (1) 0.7
 - (2) 1.0
 - (3) 1.3
 - (4) 2.0
114. Hydraulic ram is a device :
- (1) To measure hydrostatic pressure
 - (2) Used to counter water hammer
 - (3) Lift water from deep tube wells
 - (4) Lift part of huge water available at low heads to higher heads
115. A shade factor of 35 % indicates :
- (1) Cutting light up to its 35 %
 - (2) Cutting light intensity by 35 %
 - (3) Providing shade in 35 % area
 - (4) Providing shade to leave only 35 % area open

116. The term sand-witch lining is used to represent :

- (1) Lining of sand - witches
- (2) Line of sand- witches
- (3) Lining of canals with several materials one above the other
- (4) Lining of canal patches with different lining materials

117. The hydraulic food-routing methods are :

- (1) Equation of continuity
- (2) Equation of motion only
- (3) Both momentum and continuity equation
- (4) Energy equations only

118. The most commonly used method for land grading calculations is :

- (1) Four point method
- (2) Summation method
- (3) Method of least squares
- (4) Leveling index

119. Bouncing of soil particles along soil surface is termed as :

- (1) Siltation
- (2) Saltation
- (3) Surface creep
- (4) Particle jumping

120. The contour interval between head end and tail end of a 50 m long field is 0.5 m. What is the average slope of the field :

- (1) 0.5 %
- (2) 1.0 %
- (3) 1.5 %
- (4) 2.0 %

ROUGH WORK
रफ़ कार्य

अभ्यर्थियों के लिए निर्देश

(इस पुस्तिका के प्रथम आवरण पृष्ठ पर तथा उत्तर-पत्र के दोनों पृष्ठों पर केवल नीली-काली बाल-प्वाइंट पेन से ही लिखें)

1. प्रश्न पुस्तिका मिलने के 10 मिनट के अन्दर ही देख लें कि प्रश्नपत्र में सभी पृष्ठ मौजूद हैं और कोई प्रश्न छूटा नहीं है। पुस्तिका दोषयुक्त पाये जाने पर इसकी सूचना तत्काल कक्ष-निरीक्षक को देकर सम्पूर्ण प्रश्नपत्र की दूसरी पुस्तिका प्राप्त कर लें।
2. परीक्षा भवन में लिफाफा रहित प्रवेश-पत्र के अतिरिक्त, लिखा या सादा कोई भी खुला कागज साथ में न लायें।
3. उत्तर-पत्र अलग से दिया गया है। इसे न तो मोड़ें और न ही विकृत करें। दूसरा उत्तर-पत्र नहीं दिया जायेगा। केवल उत्तर-पत्र का ही मूल्यांकन किया जायेगा।
4. अपना अनुक्रमांक तथा उत्तर-पत्र का क्रमांक प्रथम आवरण-पृष्ठ पर पेन से निर्धारित स्थान पर लिखें।
5. उत्तर-पत्र के प्रथम पृष्ठ पर पेन से अपना अनुक्रमांक निर्धारित स्थान पर लिखें तथा नीचे दिये वृत्तों को गाढ़ा कर दें। जहाँ-जहाँ आवश्यक हो वहाँ प्रश्न-पुस्तिका का क्रमांक तथा सेट का नम्बर उचित स्थानों पर लिखें।
6. ओ० एम० आर० पत्र पर अनुक्रमांक संख्या, प्रश्नपुस्तिका संख्या व सेट संख्या (यदि कोई हो) तथा प्रश्नपुस्तिका पर अनुक्रमांक और ओ० एम० आर० पत्र संख्या की प्रविष्टियों में उपरिलेखन की अनुमति नहीं है।
7. उपर्युक्त प्रविष्टियों में कोई भी परिवर्तन कक्ष निरीक्षक द्वारा प्रमाणित होना चाहिये अन्यथा यह एक अनुचित साधन का प्रयोग माना जायेगा।
8. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार वैकल्पिक उत्तर दिये गये हैं। प्रत्येक प्रश्न के वैकल्पिक उत्तर के लिए आपको उत्तर-पत्र की सम्बन्धित पंक्ति के सामने दिये गये वृत्त को उत्तर-पत्र के प्रथम पृष्ठ पर दिये गये निर्देशों के अनुसार पेन से गाढ़ा करना है।
9. प्रत्येक प्रश्न के उत्तर के लिए केवल एक ही वृत्त को गाढ़ा करें। एक से अधिक वृत्तों को गाढ़ा करने पर अथवा एक वृत्त को अपूर्ण भरने पर वह उत्तर गलत माना जायेगा।
10. ध्यान दें कि एक बार स्याही द्वारा अंकित उत्तर बदला नहीं जा सकता है। यदि आप किसी प्रश्न का उत्तर नहीं देना चाहते हैं, तो संबंधित पंक्ति के सामने दिये गये सभी वृत्तों को खाली छोड़ दें। ऐसे प्रश्नों पर शून्य अंक दिये जायेंगे।
11. रफ कार्य के लिए प्रश्न-पुस्तिका के मुखपृष्ठ के अंदर वाला पृष्ठ तथा उत्तर-पुस्तिका के अंतिम पृष्ठ का प्रयोग करें।
12. परीक्षा के उपरान्त केवल ओ एम आर उत्तर-पत्र परीक्षा भवन में जमा कर दें।
13. परीक्षा समाप्त होने से पहले परीक्षा भवन से बाहर जाने की अनुमति नहीं होगी।
14. यदि कोई अभ्यर्थी परीक्षा में अनुचित साधनों का प्रयोग करता है, तो वह विश्वविद्यालय द्वारा निर्धारित दंड का/की, भागी होगा/होगी।