



P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Fifth Semester, B.E. - Civil Engineering

Semester End Examination; Feb. - 2021

Proficiency in Civil Engineering (Technical Skills - I)

Time: 2 hr.

Max. Marks: 50

Course Outcomes

The Students will be able to:

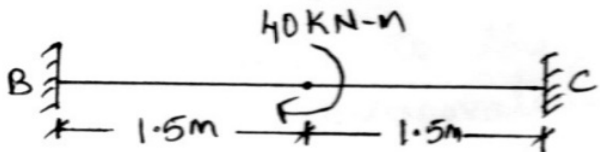
CO1: Understand the principles and analysis of elements in structural engineering.

CO2: Understand the principles and application of Water Resources Engineering.

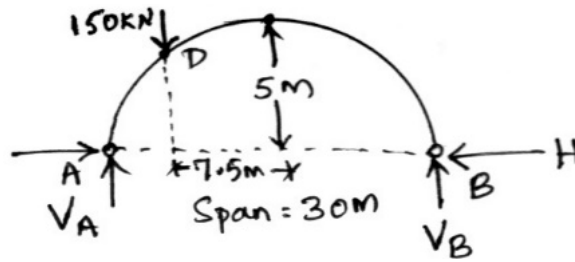
CO3: Understand the principles and usage of Geomatics engineering and Transportation Engineering.

CO4: Understand the principles and perceive Construction Management.

Note: All questions are compulsory and each question carries TWO marks.

Q. No.	Questions	BLs	COs	POs
1.	The branch of mechanics that deals with the study of forces on the body at rest is called----- a) Dynamics b) Statics c) Statistics d) Motion Mechanics	L1	CO1	PO1
2.	A body which does not alter its shape or size on the application of extended force is called ----- a) Elastic body b) Rigid body c) Deformable body d) Ductile body	L1	CO1	PO1
3.	The ratio of limiting friction and normal reaction is called ----- a) Static friction b) Angle of friction c) Dynamic friction d) Coefficient of friction	L1	CO1	PO1
4.	The degree of indeterminacy of statically determinate truss is ----- a) $\eta = 0$ b) $\eta = m + r - 2j$ c) $\eta = m - r - 2j$ d) $\eta = m + 2j - r$	L1	CO1	PO1
5.	Following method is an example of force method of analysis of structures a) Moment Distribution method b) Slope Deflection method c) Three moment theorem d) Kani's method	L1	CO1	PO1
6.	When the length of a simply supported beam, carrying a point load at midspan is doubled, the deflection below the load becomes a) Two times b) Four times c) Six times d) Eight times	L3	CO1	PO2
7.	Fixed end moment, M_{FBC} is ----- <div style="text-align: center;">  </div>	L3	CO1	PO2
	a) 10 kN-m b) 20 kN-m c) 30 kN-m d) 40 kN-m			

8. The horizontal thrust of three lined arch shown is -----



L3 CO1 PO2

- a) 110.5kN b) 112.5 kN c) 115.3 kN d) 111.3 kN

9. The dimensional change that occur in a material due to the application of loads disappear completely on the removal of the load is called-----

L1 CO1 PO1

- a) Plastic strain b) Proof stress c) Elastic strain d) Strain hardening

10. Minimum cement content in kg/m^3 for reinforced concrete subjected to moderate exposure is -----

L1 CO1 PO1

- a) 280 b) 300 c) 320 d) 350

11. The most suitable chemical which can be applied to the water surface for reducing evaporation

L1 CO2 PO1

- a) Methyl alcohol b) Ethyl alcohol
c) Cetyl alcohol d) Butyl alcohol

12. As per Lacey's theory, the silt factor is

L1 CO2 PO1

- a) Directly proportional to average particle size
b) Inversely proportional to average particle size
c) Directly proportional to square root of average particle size
d) Not related to particle size

13. If the irrigation is 80% conveyance losses are 20% and the actual depth of watering is 16 cm, the depth of water required at the canal out let is

L3 CO2 PO2

- a) 10 cm b) 25 cm c) 50 cm d) 75 cm

14. The structure constructed to allow drainage water to flow under pressure through an inverted syphon below a canal is called-----

L1 CO2 PO1

- a) Syphon aqueduct b) Aqueduct
c) Syphon d) Super passage

15. Biochemical Oxygen Demand (B.O.D) of safe drinking water must be

L1 CO2 PO2

- a) 5 b) 10 c) 15 d) Nil

16. A pilot tube is used to measure

L1 CO2 PO1

- a) Pressure b) difference in pressure
c) Velocity of flow d) Volume

17. If the volume of liquid weighing 3000 kg is 4 cubic meters, its specific gravity is -----

L3 CO2 PO1

- a) 1 b) 0.5 c) 0.7 d) 0.75

18. A digital image is made up of square or rectangular areas called -----
- a) Bits b) Pixels L1 CO3 PO1
c) Kilobytes d) Units
19. The property of stones to withstand the adverse action of weather is called ----
- a) Durability b) Hardness L1 CO3 PO1
c) Toughness d) Ductility
20. Test conducted to determine the temperature susceptibility of road bitumen is
- a) Flash and Fire point test
b) Specific gravity L1 CO3 PO1
c) Softening point test
d) Ductility Test
21. The expansion of "G.I.S" is
- a) Geographic Information System
b) Geo logical Information System L1 CO3 PO1
c) Geo graphic Information structure
d) Geo logical Information Structure
22. The absolute minimum sight distance required for stopping a vehicle moving with a speed of 8 kmph
- a) 200 m b) 150 m L3 CO3 PO3
c) 130 m d) 120 m
23. The difference between the time available to do a job and the time required to do the job is known as
- a) Float b) event L1 CO4 PO1
c) duration d) constraints
24. CPM is:
- a) Synthesizing in concepts
b) Is based on time estimate L1 CO4 PO1
c) Is used for repetitive works
d) All of the above
25. The performance of a specific task in CPM is known as
- a) Dummy
b) Event L1 CO4 PO1
c) Activity
d) Contract