PDPM INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN AND MANUFACTURING, JABALPUR

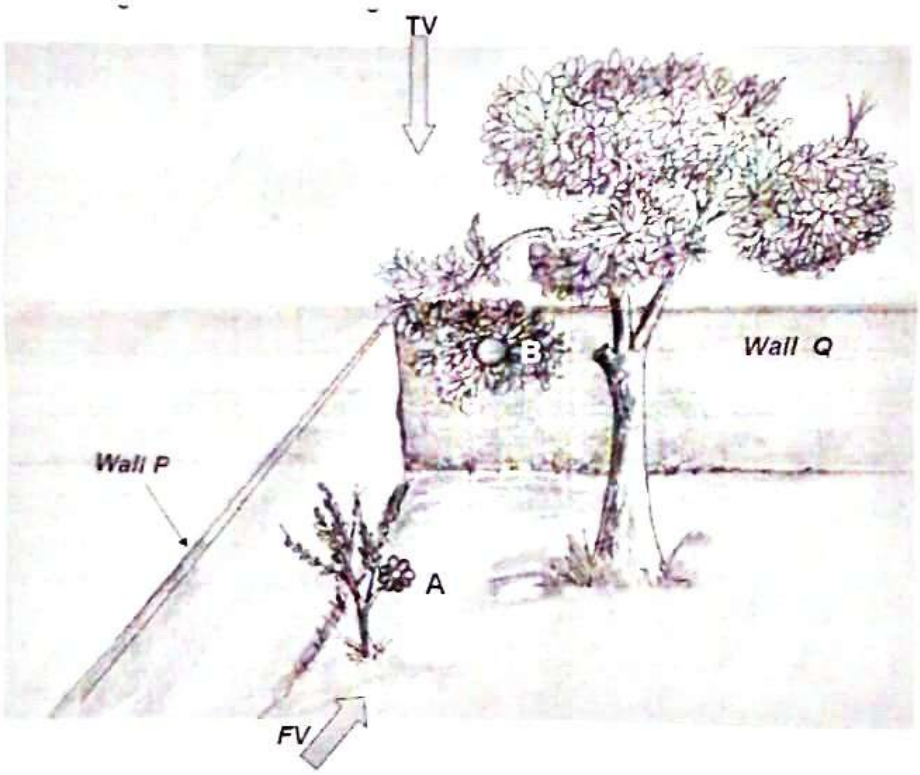
An Institute of National Importance established by Ministry of Education, Government of India

Dumna Airport Road, Jabalpur - 482005, India

Exam: END Semester, **Year:** B.Tech, I Yr., **Course:** DS1005- EG **SET-D**

Exam Duration: 3 Hr. **Marks:** 100 **Roll No.:**.....

Note: All questions are compulsory.
In the Drawing sheet mention your SET, like SET-A, B, C, D.
It is mandatory to show necessary calculations for the given question, within the drawing sheet.
For the roughwork you use backside of this question paper.

S. No.	Questions	Marks
1.	Two objects, a flower (A) and an orange (B) are within a rectangular compound wall, whose P & Q are walls meeting at 90^0. Flower A is 1m & 5.5 m from walls P & Q respectively. Orange B is 4m & 1.5m from walls P & Q respectively. Drawing projection. find distance between them If flower is 1.5m and orange is 3.5m above the ground. Consider suitable scale. 	15
2.	A regular Pentagonal lamina of 30 mm sides is resting on HP on one of its corners with its surface inclined at 30^0 to the HP. Draw its projections when the side opposite to the corner in the in HP is parallel to the VP.	15
3.	A hexagonal prism of base edge 30 mm and axis 70 mm has an edge of its base in the V.P. and inclined at 60° to the H.P. Draw its projections, when the edge of the other base farthest away from V.P. is at a distance of 85 mm from the V.P.	20

PDPM IIITDM Jabalpur
End Semester Examination (June 2022)
Indian Culture, Ethics and Human Values

Sub Code: HS1002
Branch: BTech/BDes II Sem

Duration: 3 hours
Max. Marks: 40

Note: All the questions are compulsory.

Answer all the questions (500 words).

1 "The simple approach of creating and sticking to a simple set of rituals along with being honest, treating people with the respect they deserve and doing it all with a smile is working for Tristan and the TPC team". Explain with the more added values you understand on this above statement. (8 marks)

2 "But their time is come; and I fervently hope that the bell that tolled this morning in honour of this convention may be the death-knell of all fanaticism, of all persecutions with the sword or with the pen, and of all uncharitable feelings between persons wending their way to the same goal".
How far the quote of Swami Vivekananda is relevant even today?(8 marks)

3 "This is no time for petty and destructive criticism, no time for ill will or blaming others." Elucidate your thoughts on serving humanity. (8 marks)

4 "Where the world has not been broken up into fragments
By narrow domestic walls".
Substantiate your views on Tagore's universal understanding and belief. (8 marks)

5 "Whatever the great man does or sets any standard, the world just applauds and follows". How far do you agree with this statement? (8 marks)

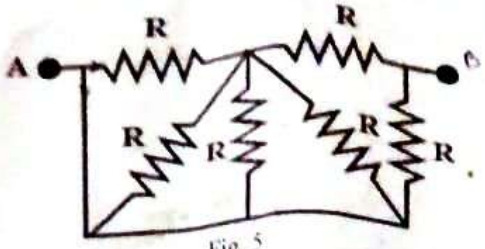


Fig. 5

Q.6. The V-I characteristics as seen from the terminal pair A-B of the network shown below, if a variable load R_L is connected across A-B, then find out the maximum power supplied to the R_L. (4)

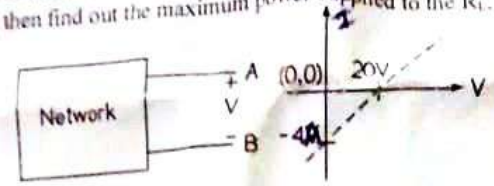


fig. 6

Q7. In the given circuit (Fig. 7) find-out the value of V_1 and V_2 (3)

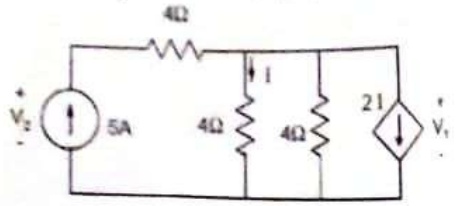


Fig. 7

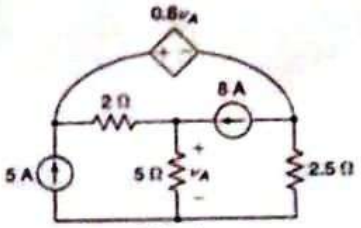


Fig. 8

Q8. With the help of nodal analysis, find power dissipated across 2.5 Ω resistor, shown in Fig. 8 (see above). (3)

Q9. Find R_{in} in below circuit: (3)

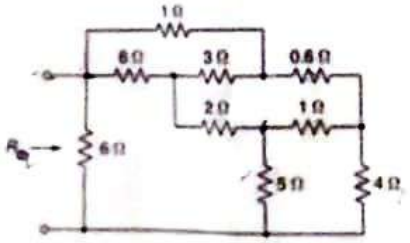


Fig. 9

Q10. Determine V_3 in the circuit using the mesh analysis: (3)

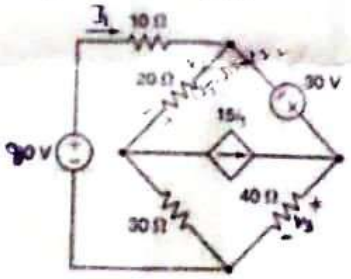


Fig. 10

Pt. Dwarka Prasad Mishra Indian Institute of Information Technology Design & Manufacturing, Jabalpur
(An Institute Established by MHRD, Govt. of India)
Dumna Airport Road, Khamaria, Jabalpur, India-482005

Mid Sem Examination (2021-2022)

Basic Electronics (ES1002)

Instructions: 1. In multiple choice and fill in the blank type questions, WRITE answers in answer sheet with proper explanation. 2. All Questions are compulsory.

Max. Marks: 30 | **Batch: C & D** | ***Duration: 2 Hours***

Q1. Find i_x using Thevenin theorem (3)

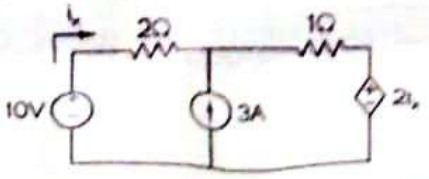


fig. 1

Q2. In below network V and I show the ideal independent voltage and current source, respectively. Find the total power delivered in load R_L, when both the sources acted simultaneously. Given that.
(i) if only V is acting them power loss in R_L is 4 W.
(ii) If only I is acting them power loss in R_L is 9 W (3)

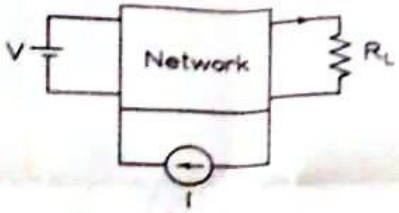


Fig. 2

Q3 Solve Fig. 3 (shown below) for V_R: (3)
(i) If R = 10 Ω, then V_R = 20V
(ii) If R = 20 Ω, then V_R = 30V
(iii) If R = 80 Ω, then V_R =?

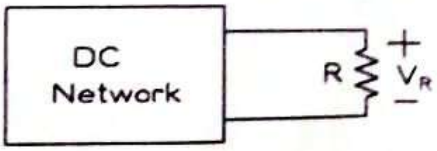


fig. 3

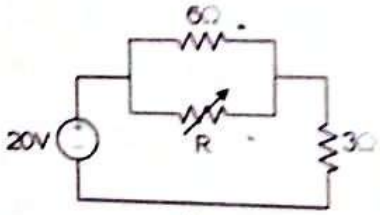


fig. 4

Q4. For what value of ***R*** the maximum power is transfer to 3 Ω resistor, shown in Fig. 4 (see above)? (3)

(a) 2 Ω (b) 3 Ω (c) 6 Ω **(d) 12 Ω**

Q5. Find R_{eq} of the following network between A and B: (2)

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4.	A hexagon prism, of base 30 mm and axis 60 mm standing on H.P. On its base whose one side is perpendicular to V.P. It is cut by a section plane 30° inclined to H.P., through mid-point of axis. Draw front view, section top view & section side view. Also draw true shape of section and Development of surface of remaining solid.	20
5.	A particle which is initially on base circle of a cone, standing on H.P., moves upwards and reaches apex in one complete turn around the cone. Draw it's path on projections of cone as well as on it's development. Take base circle diameter 50 mm and axis 70 mm long.	15
6	Given figure shows orthographic projections of an object. Draw its isometric view	15