

FACULTY OF ENGINEERING**B.E. I - Semester (CBCS) (Backlog) Examination, December 2018 / January 2019****Subject : Computer Programming & Problem Solving****Time : 3 Hours****Max. Marks: 70****Note: Answer all questions from Part-A & any five questions from Part-B.****PART – A (20 Marks)**

- 1 Draw a flowchart to find maximum of 5 different numbers.
- 2 What is the use of type conversion? Define the various types conversions with example.
- 3 What will be the output of the following C code


```
# include < stdio.h >
main ( )
{
    int x = 2, y = 1, z = 9 ;
    x = x & & y || z
    printf (" % d \ n", x || ! y && z ) ;
}
```
- 4 Discuss how recursive function behaviour differs from a function called in a loop.
- 5 Write a program to print sum of 'n' numbers.
- 6 Why macros are better than function?
- 7 What is dynamic memory allocation? List the different function used to allocate memory dynamically.
- 8 List any four string handling function with syntax.
- 9 Define Bit field. What is the purpose of bit field?
- 10 What are the different modes in which a file can be opened? Give their syntax.

PART – B (50 Marks)

- 11 (a) Write a C program "temp. C" that accepts a temperature in Fahrenheit and prints the corresponding temperature in celcius.

$$(C/5 = (F - 32) / 9)$$
 (6)

(b) Mention the precedence of operators adapted in 'C' and mention the need for associativity of operators. (4)
- 12 (a) Write a C program to calculate the volume of the following shapes : cube, cuboids, cone. Take the appropriate required inputs and calculate one of a them. The inputs should be taken in the main function and calculation of each volume should be done in separate function by passing appropriate arguments. (7)

(b) Elaborate on storage classes clearly. (3)
- 13 (a) Write a C program to sort an array of integers using bubble sort. (7)

(b) Brief about the purpose of preprocessor directions. (3)
- 14 Write short notes on each of the following with an example.

(a) Void pointers (5)

(b) Null Pointers (5)

..2..

- 15 (a) Explain clearly with an example, to demonstrate the use of structure within structures. (6)
(b) Discuss on enumerated data types with an example. (4)
- 16 (a) Elaborate on character Input / Output functions with examples. (5)
(b) Write a program for checking whether a given string is palindrome (or) not. (5)
- 17 (a) Write a program to find the sum of the following series
 $1+3^2 + 5^2 + 7^2+\dots N^2$ where N is odd number. (6)
(b) Write about : (2+2)
(i) Switch statement with example.
(ii) Recursive function with example

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FACULTY OF ENGINEERING**B.E. I-Year (Backlog) Examination, December 2018 / January 2019****Subject: Engineering Graphics****Time: 3 Hours****Max. Marks: 100****Note: Answer all questions from part A and any five questions from part B.****PART-A (35 Marks)**

1. What is the difference between a diagonal and vernier scale? 3
2. Draw a pentagon having 30mm sides such that one of its edges is vertical. 4
3. Draw the projections of the following points on a common reference line keeping the distance between their projectors 25mm apart. 3
 - a) Point A 40mm above the H.P. and 25mm in front of V.P.
 - b) Point B 40mm above the H.P. and on the V.P.
 - c) Point C 25mm in front of the V.P. and on the H.P.
 - d) Point D 25mm above the H.P. and 30mm behind the V.P.
4. A hexagonal plane with a 30mm side has its surface parallel to and 20mm in front of V.P. Draw its projections, with (a) a side is perpendicular to the H.P., (b) a side is parallel to the H.P. 4
5. State the shape and number of faces in dodecahedron and icosahedrons. 3
6. A square prism having base with a 40mm side and 60mm height, is resting on its base on the ground. Draw its projections when a vertical face is perpendicular to the V.P. 4
7. Draw an involute to square of length 30mm 3
8. Draw the development of a square prism, with a 40mm base and a 60mm axis, resting on its base in the H.P. with a rectangular face parallel to V.P. 4
9. Define isometric axes and isometric planes. 3
10. Construct an isometric scale of length of 10cm. 4

PART-B (5×13=65 Marks)

11. a) Construct a scale of 1:40 to read meters and deci meters and long enough to measure up to 6m Mark on it a distance of 4.7m. 6
 - b). Draw a cycloid for one complete revolution of a circle having a 50mm diameter. Draw a tangent and a normal to the curve at a point distant 35mm above the base line. 7
12. A 80mm long line PQ, is inclined at 45° to the H.P. and 30° to the V.P. the end P is in H.P. and 40mm in front of V.P. Draw its projections. 13
13. A circular plane with a 60mm diameter is resting on a point of its circumference on the V.P. the centre is 40mm above the H.P. and the surface is inclined at 45° to the V.P. and perpendicular to the H.P. Draw its projections. 13
14. A cylinder with a 50mm base diameter and a 65mm long axis, has a generator in the V.P. and is inclined at 45° to the H.P. Draw its projections. 13

- 15. Draw the development of lateral surface of a square pyramid with a 40mm base side and a 60mm long axis which is resting on its base in the H.P. when all the sides of the base are equally inclined to the V.P. 13

- 16. Draw an isometric view of a cylinder, with a 50mm base diameter and a 70mm long axis (a) when the base is on the H.P. and (b) when one of the generators is on the H.P. 13

- 17. The following fig shows the isometric projection of an object. Draw the orthographic 13


