2020/TDC/ODD/SEM/
BCAC–103/179

TDC Odd Semester Exam., 2020
held in July, 2021

COMPUTER APPLICATION

(Honours)

(1st Semester)

Course No. : BCAC–103

(Programming with FORTRAN)

Full Marks : 35
Pass Marks : 12

Time : 2 hours

The figures in the margin indicate full marks for the questions

Answer **five** questions, taking **one** from each Unit

UNIT—I

1. Discuss the overview of computers and languages. Define the following : 2+2+2+1=7

(a) Arithmetic statement

(b) Variable and constant

(c) Operator

2. *(a)* Why are the following unacceptable as FORTRAN integer constants?

28E3 and 1 2 3 4 5 6 7 8 9

Give suitable reasons. 3

(b) Express the following statements in FORTRAN : 4

(i) $A^2 \quad B^2 \quad (A \quad B)^2 \quad 2AB$

(ii) $\sin A \quad \cos B \quad (\tan B)^2$

UNIT—II

3. *(a)* If A 145·78, B 18·4, I 95, describe the output for the following FORTRAN statements : 2

```
    WRITE ( , 5) A, B, I
5   FORMAT (F 10·5, F 4·1, I2 )
```

(b) Write a FORTRAN program to find out the area of a circle (a pi r^2). 5

4. *(a)* If A 145·78, find out the output for the following FORTRAN statements : 2

```
    WRITE ( , 5) A
5   FORMAT (IX, "VALUE OF A", F 10·5)
```

(b) Write a FORTRAN program to find out the volume of cylinder (v pi $r^2 h$). 5

UNIT—III

5. Write the general form of DO loop. Write a FORTRAN program to find out the sum of first ten natural numbers using DO loop. 2+5=7

6. What are the rules for subscribed variables? Write a FORTRAN program to add two matrices of 2 2 dimension. 2+5=7

UNIT—IV

7. *(a)* Define subroutine with an example. 2

(b) Write a FORTRAN program to find out square-root of *n* and sin of *m* using arithmetic statement function. 5

8. *(a)* What are the advantages of FUNCTION in FORTRAN? 2

(b) Write a FORTRAN program to find out the factorial of a number using FUNCTION. 5

UNIT—V

9. *(a)* Write short notes on COMMON and EQUIVALENCE statements. 4

(b) How logical operators are used in FORTRAN? Give example. 3

10. *(a)* How characters are stored in FORTRAN? Give example. 3

(b) What do you mean by COMMON A, B, C? 2

(c) Define L-field. 2

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