

Total No. of printed pages = 3

IT-301/IT/3rd Sem/2016/N

INFORMATION TECHNOLOGY

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks
for the questions.

Questions number 1 and 2 are compulsory.

Answer any *five* from the rest.

1. (a) What do you mean by generations of computer ? 2
- (b) What is network topology ? 2
- (c) Define a flowchart. 2
- (d) What do you mean by internet ? 2
- (e) What are compilers and interpreters ? 2

[Turn over

2. (a) Convert the following : $2+3=5$

(i) the binary number 1101101111110101 to hexadecimal.

(ii) Hexadecimal number $ABC7_{16}$ to binary.

(b) State Shannon Fano algorithm. Find out the binary code, code length and total length from the following : $2+3=5$

Symbol	A	B	C	D	E
Count	15	7	6	6	5

3. Discuss about the different generations of programming language and state its advantages and disadvantages. 10

4. How is information represented in digital media ? Explain. 10

5. Define an algorithm and list the characteristics of a good algorithm. Explain about pseudocode. $3+3+4=10$

6. What is an operating system ? What are the main functions of an operating system ? $4+6=10$

7. What is ROM ? Explain about the different types of ROM. 2+8=10
8. Discuss the three data transmission mode in brief with proper diagram. 10
9. Write short notes on : 5+5=10
- (i) e-commerce
 - (ii) IT in education.
10. Define the following : 5×2=10
- (a) URL
 - (b) HTML
 - (c) Hub
 - (d) Router
 - (e) Telnet.