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BSM-016

**BACHELOR OF BUSINESS
ADMINISTRATION (SERVICES
MANAGEMENT) [BBA(SM)]**

Term-End Examination

December, 2023

BSM-016 : MANAGING SERVICE OPERATIONS-II

Time : 2 Hours

Maximum Marks : 50

Note : *All questions are compulsory.*

1. Answer all questions. Each question carries
1 mark. 1×10=10

Fill in the blanks :

- (a) A queue is formed in any service system;
whenever exceeds the existing
capacity to serve.
- (b) Service system analysis must begin with a
complete understanding of and
..... distribution of the demand for
that service.

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- (c) is used to represent the mean time that the customer spends in queue for a busy system.
- (d) A simulation which models complex stochastic data is defined as
- (e) An aircraft maintenance service is scheduled in parts every hour in case we need to simulate the process, it will be an example of simulation.

State whether the following statements are True or False :

- (f) The customer can be considered a potential resource that participates in a service process.
- (g) In the arrival process, the mean and standard deviation are always equal.
- (h) M/M/1 is a single server queuing model.
- (i) For a single server model, the mean arrival rate is more than the mean service rate.
- (j) In the long-run, capacity to serve must equal demand.

2. Answer any *five* of the following in about **100** words each. Each question carries 2 marks.

2×5=10

- (a) What do you mean by interarrival time ?
- (b) Define jockeying in queuing theory.
- (c) Name various classifications of queuing model.
- (d) Define finite-queue M/M/1 model.
- (e) Discuss economic tradeoff in capacity planning.
- (f) Differentiate between a random and a pseudo-random number.
- (g) Define inverse transformation method.
- (h) Define normal distribution function.

3. Answer any *four* of the following in about **250** words each. Each question carries 5 marks.

5×4=20

- (a) Explain the three-types of continuous variable distribution methods.
- (b) Define M/M/1 model. Explain how this model is used by service firms.
- (c) Define Monte-Carlo simulation.

- (d) Differentiate between the capacity management in a service unit and a manufacturing unit.
 - (e) List various classification of queuing models. What is ABC classification in queuing ?
 - (f) Write a short note on how the exponential distribution is related to the Poisson distribution.
4. Answer any *one* question in about **500** words :

10

- (a) Define simulation. List the steps involved in simulation.
- (b) Define the service process. Explain the various classifications of service process.