

**B.Sc. (A & G) Sem. – IV (Animation & Gaming) (CBCS - 2015
COURSE) : SUMMER - 2019**

SUBJECT : INFORMATION TECHNOLOGY FOR GAMES

Day : Saturday
Date : 11/05/2019

S-2019-1327

Time : 10.00 am to 01.00 pm
Max. Marks : 60

N. B. :

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat diagram **WHEREVER** necessary.
-

SECTION – I

Q.1 Solve **ANY FOUR** Questions: **(10)**

- a) What is database? What is DBMS?
- b) Define single valued and multi valued attribute.
- c) Explain weak entity.
- d) Define Primary Key and Foreign Key.
- e) List all aggregate functions in SQL.

Q.2 Solve **ANY TWO** Questions: **(20)**

- a) Explain DDL and DML queries with example.
- b) Explain advantages of DBMS over traditional file management systems.
- c) A **University Registrar's Office** maintains data about the following entities:
 - i) **Courses**: including number, title, credits, syllabus and prerequisites;
 - ii) **Course** offerings: including course number, year, semester, section number, instructor(s), timings and classroom;
 - iii) **Students**: including student-id, name and program;
 - iv) **Instructors**: including identification number, name, department and title.

Further, the enrollment of students in courses and grades awarded to students in each course they are enrolled for must be appropriately modeled.

Construct an E – R diagram for the Registrar's Office. Document all assumptions that you make about the mapping constraints.

SECTION – II

Q.3 Write short notes on **ANY TWO** of the following: **(10)**

- a) Sensors for gaming
- b) OpenGL
- c) Storage for Mobile Games

Q.4 Draw OSI reference model and explain the functioning of each layer in brief. **(10)**

Q.5 Describe multiplayer game development using C#. Discuss implementation details. **(10)**

* * * * *