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**BSH 402**

**First Semester M.Sc. Degree Examination, December 2018**  
**(CBCS)**  
**BIOSCIENCES**  
**Cell Biology and Genetics**

Time : 3 Hours

Max. Marks : 70

1. Write short notes on **any four** of the following (**not exceeding 2 pages each**) : **(4×4=16)**
- a) Liposomes
  - b) Centromere
  - c) Sex related traits
  - d) Conjugation
  - e) Mutagens
  - f) Microtubules.

Write explanatory notes on **any five** of the following (**not exceeding 3 pages each**) : **(5×6=30)**

- 2. Protein sorting and transport.
- 3. Flow cytometry
- 4. Polytene chromosomes and the functional significance.
- 5. Laws of DNA constancy and C-value paradox.
- 6. Principle and applications of SEM and TEM.
- 7. Mendel and principles of inheritance.
- 8. Processes of meiosis and meiotic errors.

Answer **any two** of the following (**not exceeding 8 pages each**) : **(2×12=24)**

- 9. Describe any two diseases affecting humans that are caused by mutations.
  - 10. Explain genetic information organized in the eukaryotic chromosome.
  - 11. Explain the process of sex determination in different species.
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