Rubric with Model Answers

Instructions:-
Main points of answer are given below each question. Marks for these points are given against them. A student may present these points in the form of paragraph or points, both cases are acceptable. If a student writes anything other than these points and if that is correct, he/she should be awarded with marks.

Question No.33. (a) What is renal failure?

Rubric: Award two marks for correct definition.
Renal failure is the complete or partial failure of kidneys to work.

(b) What are the main four causes of renal failure?

Rubric: Award one mark for each correct cause of renal failure.
Causes: Long term infections, Diabetes mellitus, hypertension, sudden blockage of blood supply to the kidneys.

(c) Describe the treatment of renal failure.

Rubric: Award 3 marks for description of dialysis and 3 marks for description of kidney transplant.

Question No.34. (a) Give four differences between mitosis and meiosis.

Rubric: Award two marks for each correct difference.

<table>
<thead>
<tr>
<th>Mitosis</th>
<th>Meiosis</th>
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<tbody>
<tr>
<td>Number of chromosomes remains same.</td>
<td>Number of chromosomes becomes half.</td>
</tr>
<tr>
<td>Two daughter cells are produced.</td>
<td>Four daughter cells are produced.</td>
</tr>
</tbody>
</table>
Occurs in general body cells. | Occurs to produce gametes.
---|---
عام جسمانی سیلز میں ہوتا ہے۔ | پہلو گامی سیلز نے کلے کریں۔

Only one cell division takes place. | Two cell divisions take place.
صرف ایک ڈویژن ہوتی ہے۔ | دو ڈویژن ہوتی ہیں۔

(b) Name the cells produced by meiosis in animals.

Rubric: Award one mark for each correct name.

Sperm and egg.

Question No.35. (a) What is an acid?

Rubric: Award two marks for correct definition.
The compound which produces hydrogen ions (H⁺) in its aqueous solution.

(b) Complete and balance the following incomplete equations representing properties of acids.

Rubric: For each equation, award one mark for completion and one mark for balancing.

Mg + 2HCl → MgCl₂ + H₂
ZnCO₃ + H₂SO₄ → ZnSO₄ + H₂O + CO₂
NaOH + HCl → NaCl + H₂O

(c) Give any two uses of nitric acid.

Rubric: Award one mark for each correct use.
Manufacturing of fertilizers, explosives, dyes, plastics and artificial silk.

Question No. 36. (a) Describe principal focus of a concave lens with the help of diagram.

Rubric. Award two marks for correct description and two marks for correct diagram.

Light rays parallel to the principal axis diverge after passing through the lens and appear to diverge from one point which is called principal focus of concave lens.

(b) Draw a ray diagram to show how an image is formed when an object is placed in front of a concave lens.

Rubric: Division of marks for ray diagram is given below.
Correct lens (1), Correct points (1), Correct position of object (1), Correct rays (2), Correct image (1)
Question No.37. (a) How is electricity generated from thermal energy?

Rubric: Award one mark for each correct step in generating electricity using thermal energy.

Coal is burnt, water changes into steam, steam turns the blades of turbine and rotating shaft turns the rotor which generates electricity.

(b) Name any two sources other than thermal energy to generate electricity. Also describe two problems related to thermal power generation.

Rubric: Award one mark for one correct source. And award two marks for one correct problem related to thermal power generation.

Sources: Wind energy, nuclear energy etc.

Problems: Air pollution, running short of reserves of fossil fuels etc.