

- Question 2.
- (a) Permanent over-distension of terminal airways with destruction of alveoli. Increased fibrous and connective tissue, loss of elasticity and loss of capillaries, etc. -(2 marks)
 - (b) (i) Exercise to limit of tolerance short of causing wheezing, distress, etc. -(2 marks)
 - (ii) Use before wheezing becomes established, prior to exertion, prior to any postural drainage or use of steroid aerosol if given. Not more frequently than safe for particular preparation. -(2 marks)
 - (iii) Diet to avoid or reduce obesity. Sufficient to supply calories - may be very high in some cases due to work of breathing. Avoid gas producing foods and over-distension of gut. Avoid constipating foods. -(2 marks)
 - (iv) Diaphragmatic type respiratory pattern, pursed lips, relaxation, possibly postural drainage. -(2 marks)
- (10 marks)

- Question 3.
- (a) Bacterial - meningococcus (*Neisseria meningitidis*); pneumococcus; haemophilus. -(1 mark)
 - (b) 1. Fever.
2. Severe headache.
3. Neck and spinal stiffness.
4. Nausea and vomiting.
5. Irritability.
6. Photophobia.
($\frac{1}{2}$ mark each) -(3 marks)
 - (c) Lumbar puncture. Cloudy C.S.F. under pressure. Increased leucocytes. Organisms. (1 mark each) -(2 marks)
 - (d) Observations: Neck and spinal stiffness, fever, pulse, blood pressure, conscious state, fitting and twitching, rash, headache, pupil reaction to light, fluid balance chart. -(4 marks)

Patient comfort: Quiet, dark room. Tepid sponge as necessary. Minimum gentle handling. Help with fluids, food. Stay quietly with patient. -(2 marks)

Food and fluids: No food in acute stage. Glucose fluids by mouth or I.V. Perhaps naso-gastric tube. Light food introduced gradually. -(2 marks)
 - (e) Internal hydrocephalus.
Mental retardation, epilepsy, deafness, or other relevant complications. -(1 mark)
- (15 marks)

- Question 4.
- (a) morphine 10-15 mgms. I.V.I. or I.M.I.
frusemide "Lasix" 20-40 mgms I.V.I.
aminophylline 250 mgms slow I.V.I. -(3 marks)
 - (b) Effects: morphine - reduces respiratory rate; calms patient; dilates peripheral blood vessels.
frusemide - diuretic effect, reduces blood volume.
aminophylline - bronchodilator effect; mild diuretic; increases cardiac output.

Question 4.(Contd.)

Relief: Ventilation improved by relieving broncho-spasm and reduces rate makes respiration more effective. With reduced blood volume, and increased flow in peripheral vessels - pulmonary congestion and oedema will be relieved. Heart action more effective.

-(6 marks)

- (c) Remain with patient. Reassurance - verbal; attitude calm and understanding; empathy. -(1 mark)
- (10 marks)

Question 5.

(a) Haemolytic streptococcal infection 2-3 weeks previously, commonly in throat and tonsils.-(1 mark)

(b) (i) T.P.R. - B.P. Fluid balance chart. Appetite. Headache. General appearance. Urine volume, specific gravity, blood, protein. -(3 marks)

(ii) Cardiac failure. Hypertensive crisis. Fitting. Acute renal shut down. Chronic progressive nephritis. Nephrotic syndrome. (any three with appropriate observational points and explanation) -(6 marks)

-(10 marks)

Question 6.

(a) acute pyelonephritis due to acute pyogenic bacterial infection of kidney and urine. Mostly due to ascending urinary infection.

Acute glomerulo-nephritis not caused by intrinsic renal infection but the result of indirect mechanism - often immunological and/or vascular. -(4 marks)

- (b) 1. Conditions causing urinary stasis, bed rest, etc., neurological disorders, ureteric reflux, prostatism, bladder diverticulae, etc., pregnancy.
2. Introduction of bacteria into urinary tract. Catheters, cystoscopes, etc., intercourse.
3. Foreign body. e.g., stones, neoplasms.

Or other reasonable explanation and condition.

-(6 marks)

-(10 marks)

Question 7.

(a) Lack of haemoglobin due to destruction of red blood cells faster than the replacement by bone marrow. -(1 mark)

(b) Incompatible blood, auto-immune disease, fragile abnormal cells, e.g., hereditary spherocytosis, thalassaemia, Sickle cells, etc. -(2 marks)

(c) (i) Failure of Vitamin B12 reaching bone marrow due to insufficient intrinsic factor necessary for absorption of Vitamin B12. -(2 marks)

(ii) Vitamin B12 (Cytamen) I.M.I. for life.

Question 7. (Contd.)

- (d) Absence of factor **viii** one of factors of clotting mechanism. -(1 mark)
- (e) (i) Spontaneous bleeding into skin or mucous membrane, thrombocytopenia or vascular in origin. -(1 mark)
- (ii) Thrombocytopenia, scurvy, leukaemia, aplastic anaemia, meningococcal meningitis, fragility of capillaries. (Or other acceptable answer). -(1 mark)
- (10 marks)

Question 8.

- (a) This condition results from a deficiency of thyroxine which is produced by the thyroid gland. It occurs in the adult. -(2 marks)
- (b) Atrophy of gland. Complete thyroidectomy (in malignancy). Too extensive surgery for thyrotoxicosis. Excessive dosage of anti-thyroid drugs, especially radioactive iodine. -(2 marks)
- (c) Lethargic, forgetful. Skin becomes dry. Hair sparse and brittle. Sensitivity to cold increases. Weight increase. Large tongue. -(2 marks)
- (d) Radioactive iodine uptake. Serum thyroxine level. Protein bound iodine or other appropriate test. -(1 mark)
- (e) Thyroxine. -(1 mark)
- (f) Too rapid weight loss. Tachycardia. Irritability. Occurrence angina pectoris. C.C.F. -(2 marks)
- (10 marks)
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