**ROYAL CIVIL SERVICE COMMISSION**

**BHUTAN CIVIL SERVICE EXAMINATION (BCSE) 2014**

**EXAMINATION CATEGORY: TECHNICAL**

**PAPER III: SUBJECT SPECIALIZATION PAPER for *Pulmonary Medicine***

**Date** : 12 October 2014

**Total Marks** : 100

**Examination Time** : 150 minutes (2.5 hours)

**Reading Time** : 15 Minutes (prior to examination time)

**GENERAL INSTRUCTIONS:**

1. Write your Roll Number clearly and correctly on the Answer Booklet.
2. The first 15 minutes is being provided to check the number of pages of Question Paper, printing errors, clarify doubts and to read the instructions. You are NOT permitted to write during this time.
3. This paper consists of **TWO SECTIONS**, namely SECTION A and SECTION B:
* **SECTION A** has two parts: Part I - 30 Multiple-Choice Questions

Part II - 4 Short Answer Questions

All questions under SECTION A are COMPULSORY.

* **SECTION B** consists of two Case Studies. Choose only ONE case study and answer the questions under your choice.
1. All answers should be written with correct numbering of Section, Part and Question Number in the Answer Booklet provided to you. Note that any answer written without indicating any or correct Section, Part and Question Number will NOT be evaluated and no marks would be awarded.
2. Begin each Section and Part in a fresh page of the Answer Booklet.
3. You are not permitted to tear off any sheet(s) of the Answer Booklet as well as the Question Paper.
4. Use of any other paper including paper for rough work is not permitted.
5. You are required to hand over the Answer Booklet to the Invigilator before leaving the examination hall.
6. This paper has **08** printed pages in all, including this instruction page.

**GOOD LUCK!**

**SECTION A**

**Part – I: Multiple Choice Questions (30 Marks)**

**Choose the correct answer and write down the letter of your chosen answer in the Answer Booklet against the question number e.g. 31. (d). Each question carries ONE mark. Any double writing, smudgy answers or writing more than one choice shall not be evaluated.**

1. The commonest cause of pleural effusions is:

a) Carcinoma Lung

b) Connective Tissue Disorders

c) CCF

d) TB

2. In the Chest radiograph PA view below, the most probable diagnosis would be:

 

 a) Pulmonary TB

 b) Pulmonary haemorrhagic syndromes

 c) Ca Lung

 d) Artifacts

3. Smoking cigarette is harmful because it contains:

 a) nicotine

 b) carbo mono oxide

 c) carbon di oxide

 d) none of the above

4. Tietze’s Syndrome refers to a condition of the:

 a) tumours of the chest wall

 b) diaphragm

 c) rib and cartilage joints

 d) synostosis of the acromio-clavicular joints

5. Which of the following statements is true for SARS:

 a) it is caused by the virus H5N1

 b) more commonly affected HIV/AIDS patients

 c) it originated from the Congo Basin

 d) it is spread by airborne/droplet infection

6. Compared to non smokers, death due to Lung Cancer is more common among cigarette smokers by:

 a) 7%

 b) 8-25%

 c)26-50%

 d)51-100%

7. Sufferers from Sick Building Syndrome are mostly attributed to:

 a) adjustment problem

 b) circulating dust and smog

 c) toxic gases and fumes

 d) poor ventilation and recirculation of air

8. Surfactant is synthesized by:

 a) alveolar macrophages

 b) alveolar type II pneumocytes

 c) alveolar type I pneumocytes

 d) goblet cells

9 Bronchorrhoea can occur in:

 a) bronchiectasis

 b) alveolar cell carcinoma

 c) acute organophosphate poisoning

 d) all of the above

10. Gomori’s methanamine-silver nitrate stain is for detection of:

 a) mycetomas

 b) H1N1 virus

 c) pneumocystis *carinni*

 d) echinococcus *granulosus*

11. BCG vaccine is given as:

 a) subcutaneous injection

 b) intra dermal injection

 c) intramuscular injection

 d) orally at birth

12. Azygos lobe is an:

 a) intralobar sequestrated lung

 b) extralobar sequestrated lung

 c) hypoplastic lung

 d) none of the above

13. Loeffler’s syndrome is caused by:

 a) A. *lumbricoides*

 b) A. *fumigates*

 *c)* A*. niger*

d) C. *albicans*

14. Bedaquiline is used in the treatment of:

1. Sarcoidosis
2. TB
3. Mesothelioma
4. PCP

15. Pancoast syndrome is described in:

 a) bronchial carcinoids

 b) tracheal tumours

 c) mucoepidermoid tumours

 d) superior sulcus tumours

16. Hypersomnolence, pulmonary hypertension, nocturnal hypoventilation, arterial hypoxemia during wakefulness would occur in:

 a) central sleep apnea

 b) upper-airway resistance syndrome

 c) obstructive sleep apnea syndrome

 d) obesity-hypoventillation syndrome

17. Posttussive syncope is caused due to:

 a) the laryngeal reflex during cough

 b) circulatory consequences of raised intrathoracic pressure

 c) diminished oxygen supply to brain

 d) the upright position of the body

18. If the PFT shows decreased FEV1/FVC%, increased response to bronchodilators and increased lung volumes, it would be consistent with:

 a) restrictive pattern

 b) upper airway obstruction

 c) reversible obstructive pattern

 d) mixed obstructive and restrictive picture

19. The most important inspiratory muscles are:

 a) the internal intercostals

 b) the external intercostals

 c) diaphragm

 d) abdominal muscles

20. Which of the following statements is not true in Ebola Virus Disease:

 a) it is spread by airborne infection

 b) primarily a disease of the apes and animals

 c) it has reached epidemic proportions in parts of western Africa

 d) has high mortality rates

21. In acute severe asthma, the patient may present with:

 a) cyanosis

 b) unable to speak

 c) silent chest

 d) all of the above

22. MDR TB is active TB involving M. tuberculosis organisms that are resistant to:

 a) at least both H and R

 b) H, Z, E

 c) S, H, E

 d) S, R, Z and E

23. Dumb-bell tumours are usually described to be present in:

 a) neck

 b) below the clavicle

 c) neurological tumours in the spine

 d) hilum

24. The radiological resolution of community acquired pneumonia would be expected to occur by:

 a) one week

 b) two weeks

 c) four to six weeks

 d) after 3 months

25. Which of the following is not an analeptic drug:

 a) ethamivan

 b) nikethamide

 c) doxapram

 d) deflazacort

26. Lung fluke is caused by:

 a) ascariasis

b) schistosomiasis

c) strongyloidiasis

 d) paragonimus

27. Kerly B lines correspond to:

 a) peri-venous arterial channels

 b) peri broncho-arterial vessels

 c) dilated subpleural inter lobular lymphatics

 d) oedematous and thickened visceral pleura

28. The best option for treating anaerobic infections:

 a) Amikacin

 b) co-trimoxazole

c) metronidazole

 d) all of the above

29. The average rate of re-expansion of spontaneous pneumothorax is:

 a) 1.25%

 b) 2.5%

 c) 5%

d) 10% hemithoracic volume per day

30. The most common opportunistic infection in HIV infected people in our region is:

 a) PCP

 b) cryptococcosis

 c) toxoplasmosis

 d) tuberculosis

 **Part – II: Short Answer Questions (20 marks)**

**Answer ALL the questions. Each question carries 5 marks.**

1. LTOT and current approach

2. FOB – explain the procedure

3. Pulse oximetry

4. Briefly write an abstract of your dissertation submitted.

**SECTION B**

**Case Study**

**Choose either Case 1 or Case 2 from this Section. Each Case carries 50 marks. Mark for each sub-question is indicated in the brackets.**

**CASE 1**

55 years old reformed smoker (10 pack years) presents to the OPD with haemoptysis since early morning.

1. Describe the standard protocol in the management of the patient: (10)
2. Enumerate some causes of the condition in adults. (10)
3. Role of BAE (10)
4. Write short notes on the following:
5. How would you differentiate haemoptysis from haemetemesis (5)
6. Pain management in terminal respiratory care (5)
7. Assisted ventilation – principles and modes (5)
8. Karnofsky index (5)

**CASE 2**

40 year old gentleman, nonsmoker, is referred to you for non resolving pneumonia of the RLL.

1. List the possible diagnosis with at least one best diagnostic evidence (10)
2. Classify lung tumours (WHO group C: malignant epithelial tumours only) (10)
3. Middle Lobe Syndrome (10)
4. Write short notes on the following:.
5. Robert Koch (5)
6. High altitude illnesses (5)
7. Drug delivery via inhalational route (5)
8. Chronic cough with normal chest Xray – diagnostic approach (5)