

**ROYAL CIVIL SERVICE COMMISSION  
BHUTAN CIVIL SERVICE EXAMINATION (BCSE) 2018  
EXAMINATION CATEGORY: TECHNICAL**

**PAPER III: SUBJECT SPECIALISATION PAPER FOR OCCUPATIONAL THERAPY**

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<b>Date</b>	: 7 October 2018
<b>Total Marks</b>	: 100
<b>Writing Time</b>	: 150 minutes (2.5 hours)
<b>Reading Time</b>	: 15 Minutes (prior to writing time)

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**GENERAL INSTRUCTIONS:**

1. Write your Registration 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 & SECTION B:
  - **SECTION A** has two parts: Part I - 30 Multiple Choice Questions  
Part II - 4 Short Answer QuestionsAll questions under SECTION A are COMPULSORY.
  - **SECTION B** consists of two Case Studies. Choose only **ONE** case study and answer the questions of your choice.
4. All answers should be written on the Answer Booklet provided to you. Candidates are not allowed to write anything on the question paper. If required, ask for additional Answer Booklet.
5. 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 the correct Section, Part and Question Number will NOT be evaluated and no marks will be awarded.
6. Begin each Section and Part in a fresh page of the Answer Booklet.
7. You are not permitted to tear off any sheet(s) of the Answer Booklet as well as the Question Paper.
8. Use of any other paper including paper for rough work is not permitted.
9. **You are required to hand over the Answer Booklet to the Invigilator before leaving the examination hall.**
10. This paper has **8 printed pages**, 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. An occupational therapist is working in an outpatient orthopedic clinic. During the patient's history the patient reports, "I tore 3 of my 4 Rotator cuff muscles in the past." Which of the following muscles cannot be considered as possibly being torn?
  - a) Teres major
  - b) Teres minor
  - c) Infraspinatus
  - d) Supraspinatus
  
2. An occupational therapist is assessing a rupture of the ulnar collateral ligament of the thumb. Which of the following terms is another phrase for this condition?
  - a) Early sign of CTS
  - b) Mallet finger
  - c) Herberden's nodule
  - d) Gamekeeper's thumb
  
3. Which of the following conveys the sensation of vibration and pressure?
  - a) Meissner's corpuscle
  - b) Ruffini's end bulb
  - c) Pacinian corpuscle
  - d) Krause's end bulb
  
4. Loss of ability to correctly carry out certain movements in response to stimuli that normally elicit them, in an absence of weakness, other motor disorder or sensory loss:
  - a) Agnosia
  - b) Apraxia
  - c) Alexia
  - d) Ataxia
  
5. For best Motor Response in Glasgow Coma Scale, the score of 4 corresponds to:
  - a) Extension to painful stimuli
  - b) Abnormal flexion to painful stimuli
  - c) Flexion/withdrawal to painful stimuli
  - d) Localizes to painful stimuli
  
6. Autonomic dysreflexia may occur in SCI patients with lesion at:
  - a) C6 and above
  - b) T6 and above
  - c) T6 and below
  - d) Cauda equina syndrome

7. Terry Thomas sign is seen in\_\_\_\_\_ .
- Scapho-lunate dissociation
  - Scaphoid waist fracture
  - AVN of lunate
  - Carpal tunnel syndrome
8. \_\_\_\_\_ is a layer of epidermis that desquamates, links adjacent cells and helps keep skin hydrated by preventing water evaporation.
- Stratum spinosum
  - Stratum lucidum
  - Stratum granulosum
  - Stratum corneum
9. A lone occupational therapist at an outpatient clinic is queued with 6 to 7 patients. Which of the following should have the highest priority for medical intervention?
- A middle-aged patient reports, “ my knee is still hurting from a recent TKR”.
  - A young boy reports, “I am starting to have breakdown of my heels”.
  - A patient that received an upper extremity cast yesterday reports, “I can’t feel my fingers in my right hand today”.
  - A young female report, “I think I sprained my ankle about 2 weeks ago”.
10. A child with hypersensitivity:
- Explores objects with her mouth.
  - Likes to be upside-down.
  - Touches toys and other tools with the tip of fingers.
  - Does not become dizzy when other child would.
11. All of the following are the muscles of thenar compartment EXCEPT:
- Oppenen’s pollicis
  - Abductor pollicis brevis
  - Flexor pollicis brevis
  - Abductor pollicis longus
12. The muscle that originates from the medial epicondyle of the humerus and inserts at pisiform and hook of hamate:
- Flexor carpi radialis
  - Flexor carpi ulnaris
  - Flexor digiti minimi
  - Abductor digiti minimi
13. Froment’s sign is a physical examination of the hand to test \_\_\_\_\_.
- Radial nerve
  - Median nerve
  - Ulnar nerve
  - Musculocutaneous nerve

14. The ability to identify a body part as left or right in Graded Motor Imagery:
- Motor Imagery
  - Laterality
  - Mirror Therapy
  - Motor relearning
15. An autoimmune condition in which there is an antibody-mediated autoimmune attack directed against acetylcholine receptors at neuromuscular junction. It's characterized by progressive muscular weakness on exertion followed by recovery of strength after a period of rest:
- Duchenne muscular dystrophy
  - Multiple sclerosis
  - Myasthenia gravis
  - Parkinson's disease
16. A child first learns to imitate the drawing of vertical lines at
- 12-17 months
  - 18 – 24 months
  - 25 – 30 months
  - 31 -36 months
17. A patient presents with stroke involving hypothalamus. Which of the following are not indicative of hypothalamus function?
- Maintains body temperature
  - Thirst centre
  - Sensation of pain
  - Control of hormone secretion
18. How can the negative symptoms of psychosis effect activities of daily functioning?
- Aggression and violence
  - Lack of motivation in personal care
  - Poor insight
  - Responding to unseen stimuli
19. The most appropriate splint for flexor tendon repair is
- Klinert's splint
  - Cock-up splint
  - Gutter splint
  - Clam shell splint
20. All of the following are obstructive pulmonary diseases EXCEPT;
- COPD
  - Bronchiectasis
  - Cystic fibrosis
  - Pneumonia

21. Eating disorder characterized by recurrent episodes of eating large amounts of food in a short period of time and feeling a lack of control over these episodes, self induced vomiting, excessive use of laxatives or diuretics, excessive exercises in order to prevent weight gain:
- Anorexia nervosa
  - Bulimia nervosa
  - Binge-eating disorder
  - All of the above
22. Athetotic cerebral palsy is characterized by involuntary choreoathetoid movements due to damage to\_\_\_\_\_ .
- Sensorimotor cortex
  - Cerebellum
  - Ventricles
  - Basal ganglia
23. All of the following are inhibition techniques EXCEPT;
- Brushing
  - Inversion
  - Reciprocal inhibition
  - Slow rocking
24. A reflex response in which when the infant's head is dropped backward, the infant reflexively extends arms followed by flexion or 'embrace' posture:
- Asymmetrical tonic neck reflex
  - Tonic labyrinthine reflex
  - Landau reflex
  - Moro reflex
25. A patient visits OT clinic with arms hanging by the side, it is adducted and medially rotated. The forearm is extended and pronated. This deformity known as 'policeman's tip hand' or a 'porter's tip hand' is suggestive of\_\_\_\_\_ .
- Radial nerve palsy
  - Axillary nerve palsy
  - Erb's palsy
  - Klumpke's paralysis
26. All of the following muscles are innervated by median nerve EXCEPT:
- Flexor pollicis brevis
  - Palmaris brevis
  - Flexor digitorum superficialis
  - Flexor digitorum profundus
27. At what age does the child starts 'Pretend Play' eg: making a cup of tea and feeding the doll?
- 12 months to < 18 months
  - 24 months
  - 25 months to < 30 months
  - 30 months to <36 months

28. The myotome of C7 is
- Elbow extension
  - Elbow flexion
  - Wrist extension
  - Shoulder abduction
29. Jobe's test is a physical examination maneuver that tests the integrity of \_\_\_\_\_ muscle and tendon.
- Teres minor
  - Subscapularis
  - Infraspinatus
  - Suprapinatus
30. \_\_\_\_\_ is a test administered to assess gross motor and fine motor skills of individual from 4-21 years.
- Beery VMI
  - BOT
  - RNDA
  - Mchat

**PART II – Short Answer Questions (20 marks)**

**This part has 4 Short Answer Questions. Answer ALL the questions. Each question carries 5 marks.**

Write short note on the following and Illustrate wherever necessary:

- Brachial plexus.
- Little's disease.
- Alcoholism.
- Zones of the hand and OT in flexor tendon repair.

**SECTION B**

**Case Study**

**Choose either Case I OR Case II from this section. Each case study carries 50 marks.**

**Case I**

Pema is 2 years 7 months old girl born full term with no complications at birth. Pema was discharged from the hospital on day 2 and his mother states that Pema was a "very good baby."

Pema often cried when she was picked up or was passed around from relative to relative. Her mother reports that Pema met her developmental milestones as follows:

- (i) she was able to sit unsupported at 6 months;
- (ii) she never crawled much and started walking at 11 months and
- (iii) she started going up and down the stairs at about 12 months.

She is very particular about the food she eats and likes very soft, almost liquid, types of food. Currently her mother blends her food and makes them pureed for her. Pema refuses to touch anything and is still fed by her mother. She dislikes bath time and likes to wear long-sleeved shirts and leggings. She refuses to walk around barefoot and her mother is also concerned that Pema often walks on her toes. Pema sometimes enjoy going to the playground especially when there are few or no children around. Pema's mother reports that Pema prefers to sit in front of the television watching children's programs and does not play with toys. Pema does not respond to her name when called despite having had a normal audiology examination. Pema's eye contact is very limited and does not verbalize her needs.

1. What is your Diagnosis on Pema after listening to her mom's concern? (1 mark)
2. What are the 3 core features associated with your diagnosis? (3 marks)
3. Describe in detail the areas of development and developmental milestones for a typically developing 2 years old child. (10 marks)
4. What is joint attention? Explain with an example. When does a child typically develop joint attention? (5 marks)
5. What are the areas of delay/ impaired in Pema at this point? (5 marks)
6. As an OT what are areas that you would like to assess in a child like Pema? (5 marks)
7. Name at least one validated tool used for screening/assessing a child like Pema. (1 mark)
8. What would be your goals for Pema? (5 marks)
9. What is your intervention plans to achieve the goal? (5 marks)
10. Describe in detail the home program activities that you would advise the mother to carry out. (5 marks)
11. Why eye contact is important and what activities would you advise/design to encourage eye contact? (5 marks)

**Case II**

Mr. Pema Sonam, a 37 years old man who suffered stroke 3 months ago visits OT out-patient clinic for rehabilitation program as advised by his physician. He has been admitted for a month in a hospital for the same and thereby discharged upon being medically stable. He is an IT professional. It has been learnt that, upon discharge from the hospital, he was left by his wife and a 6 years old son due to his disabling condition. His younger brother has accompanied him as his attendant and Mr. Pema could walk independently with a unilateral crutch. Upon examination, Mr. Pema could barely move his right hand with muscle power of 2 on MMT and right lower limb with 3+. He understands commands, and communicates with gestures and incomprehensible blabbers. He has a past surgical history of having mitral valve replacement.

1. Define stroke (cerebrovascular accident) and describe the types of stroke. What type of stroke has Mr. Pema suffered? (5 marks)
2. Illustrate and describe Circle of Willis. (5 marks)
3. List down some risk factors and causes of stroke (5 marks)
4. What is Transient Ischemic Attack? (1 mark)
5. Describe briefly on Neuro-plasticity. (3 marks)
6. Define Aphasia. Describe briefly about different types of aphasia. What type of aphasia is Mr. Pema affected with? (6 marks)
7. Describe Manual Muscle Test grades. (5 marks)
8. What are the probable problems of Mr. Pema that needs to be addressed? (5 Marks)
9. Set goals of rehabilitation for Mr. Pema. (5 Marks)
10. Describe in detail the OT rehabilitation plans for Mr. Pema. (10 marks)

**TASHI DELEK**