

Mock exam practice for the spec section

**A1. Physical development**

Exam rules apply; Mobile phones on silent and in your bag, no talking or distracting others in any way, no doodling on the paper and face away from the wall displays with the answers in!

This exam paper, completed and marked is a very useful revision tool. Try your hardest every time you are set an exam and when you review how well you’ve done, set targets for revision to ensure continuous improvement.

Always have a spare pen!

**1) Explain the difference between growth and development [2 marks]**

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**2) Analyse head proportion growth from 1 week-old to 5 years-old [2 marks]**

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**3) What is a percentile chart, what does it measure, explain and give an example? [8]**

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**Emily has given birth after 5 hours of labour and the midwife carries out some initial developmental checks on her new born son.**

**4) Identify and describe four primitive reflexes Emily’s healthy son should display [8 marks]**

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**5) Describe what is meant by a milestone and give 2 examples [3 marks] ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………**

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**6) Complete the table below, giving one example in each box [18]**

|  |  |  |
| --- | --- | --- |
| **Age** | **Gross Motor Skills** | **Fine Motor Skills** |
| New born |  |  |
| 1 month |  |  |
| 3 months |  |  |
| 6 months |  |  |
| 9-10 months |  |  |
| 12-13 months |  |  |
| 18 months |  |  |
| 2 years |  |  |
| 2 ½ years |  |  |

**7) How old if a child when they can do the below? [6 marks]**

**a) Run forwards and backwards? …………………………………………………………..  
 b) Button and unbutton clothes? ……………………………………………………………  
 c) Write their own name? ……………………………………………………………………..  
 d) Use joined up writing? ……………………………………………………………………..  
 e) Walk in a straight line? …………………………………………………………………….  
 f) Ride a bike on their own? ……………………………………………………………….**

**8) Rashid and his twin sister, Aliyah are 13 years-old. Complete the table below with a full description of both the primary and secondary characteristic changes they will be experiencing during puberty [12 marks]**

|  |  |
| --- | --- |
| **Primary Sexual Characteristics** | |
| **Aliyah** | **Rashid** |
|  |  |
|  |  |
|  |  |

|  |  |
| --- | --- |
| ***Secondary Sexual Characteristics*** | |
| ***Aliyah*** | ***Rashid*** |
|  |  |
| **Continued –Secondary Sexual Characteristics** |  |
| ***Aliyah*** | ***Rashid*** |
|  |  |
|  |  |

**9) Angela is 48 and is perimenopausal. Describe three physical and three psychological symptoms she may be experiencing and how these may impact on her life [8 marks]**

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**10) Yvonne has given birth to a little girl 4 days ago and she has chosen to breast feed her. What hormones enables her to produce milk to feed her new born? [6 marks]**

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**11) Analyse why people experience ‘middle age spread’ in Middle Adulthood [5 marks]**

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**12) Describe and explain three other physical changes in Middle Adulthood [6 marks]**

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**13) Identify the hormone and explain is involved in hot flushes experienced by perimenospausal and menopausal women [2]**

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**14) What happens biologically, in later adulthood when people experience sensorineural hearing loss? [2 marks] …………………………………………………………………………………………………………………………………………………………………………………………………………………………………………**

**14) What happens, in later adulthood when people experience conductive hearing loss? [2 marks]**

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**Answers – key word focussed**

1) Growth is the **increase** in a **measurable quantity [1 mark for the bold key words]**

Development is the complex **changes in skills, capabilities/abilities achieved [1mark]**

2) The **head size of a new born baby is much larger, proportion wise, than a 5 year old** as the new baby does not need to develop fine and gross motor movements initially, so arms and legs are not needed, as such but growth and then development is focussed on survival learning. **[1 mark for head size fact and a 2nd for analysing why this is, 2 marks in total]**

3) Percentiles are measurements that show **where a child is compared with others of the same age.** On the **growth percentiles charts are shown as lines drawn in curved patterns and predicts the height and weight a healthy baby will grow over the coming weeks and months**. When doctors or health visitors plot a child's weight and height on the chart, they see which **percentile** line those measurements land on. This recorded will be regularly up-dated **and will highlight early signs of a baby failing to thrive so a referral can be made to a paediatrician for investigation [6 points for 6 marks]** An example is, that a child born is measured on the 67th percentile chart, meaning out of a 100 children measured on average, they would be the 67th biggest, 17 above the average **[2 marks for an accurate example] [8 marks in total]**

4)**Choose 4 out of the below list, 1 mark for the correct name and 1 mark for the description**

***Glabellar reflex*** The eyes shut if an individual is tapped lightly between the eyebrows. This reflex may normally be overcome rapidly - i.e. the individual soon fails to blink, usually less than five taps.

***Snout reflex*** is a pouting or pursing of the lips that is elicited by light tapping of the closed lips near the midline. The contraction of the muscles causes the mouth to resemble a pout It is a frontal release sign.

***Rooting reflex*** new born babies, automatically turn the face toward the stimulus and make sucking motions with the mouth when the cheek or lip is touched. This reflex helps to ensure successful breastfeeding.

***Sucking reflex*** is vital to survival, the sooner a new born baby is put to the breasts the better this reflex becomes. Some premature babies that are tube fed don’t get to practice this reflex as much.

***Palmomental reflex*** consists of a twitch of the chin muscle elicited by stroking a specific part of the palm. It is present in infancy and disappears as the brain matures during childhood but may reappear in certain brain conditions.

***Grasp reflex*** appears as early as 16 weeks in utero and persists until five or six months of age. When an object is placed in the infant's hand and strokes their palm, the fingers will close tightly.

***Moro reflex*** present in all new born’s up to 3 or 4 months of age as a response to a sudden loss of support, when the infant feels as if it is falling. It involves three distinct components: spreading out the arms, unspreading the arms and crying, startled.

***Galant reflex*** is when a newborn is face down and stroked along the one side of the spine. The normal reaction is for the newborn to flexed toward the stimulated side. This is one of the reflexes tested in newborns to help rule out brain damage at birth.

***Asymmetric Tonic neck reflex***  is also known as the "fencing reflex" because of the characteristic position of the infant's arms and head, which resembles that of a classically trained fencer, when it’s head has been turned.

***Babkin reflex*** has varying responses to the application of pressure to both palms. Infants may display head flexion, head rotation, opening of the mouth, or a combination of these responses Smaller, premature infants are more susceptible to the reflex.

***Placing reflex,*** *a* baby held upright and moved near a tables edge will feel the table edge on its shin and will then automatically pick up its foot to step up on the raised surface with one foot and then repeat the second foot if the shin is touched.

***Walking reflex***, if a baby is held upright, it appears to take steps or dance with his or her feet touching a solid surface. This reflex lasts about 2 months.

5) The term milestone relates to the ability of a child to achieve something by a certain age. This would be roughly when they average child the same age could perform that task. It can involve a physical, social, emotional, cognitive or language achievement or perhaps the capability of sharing with others or expressing emotions or any fine or gross motor skill movements. **[1mark for description of milestone and 1 mark each for two examples, 3 in total]**

6) **[1mark for each clear example that accurately is within the below age ranges, 18 in total]**

|  |  |  |
| --- | --- | --- |
| **Age** | **Gross Motor Skills** | **Fine Motor Skills** |
| New born | Primitive reflexes example from answer number 4 | Holds their thumb tucked into their palm of the hand |
| 1 month | Lifts chin with some limited control of the head, wobbly and short term | Opens own hand to grasp a person’s finger |
| 3 months | Whilst lying on their front, they can lift their head up and chest off the ground temporarily | Can grasp a rattle or teething ring for short length of time |
| 6 months | Rolls over independently, can sit up for short times without support, kicks legs when held up, weight bares on legs for a short and increasing time | Moves/passes objects from hand to hand, can pick up dropped toys if they are in reach. Holds toys with a whole hand palmer grasp. |
| 9-10 months | Crawling begins following being on hands and knees rocking, can walk whilst holding someone’s hands.  Holds arms out to indicate wanting to be picked up | Can use finger and thumb to hold a small object, fine tuning dexterity movements. Points using index finger straight out to indicate something.  Grab earrings! Pick up peas!! |
| 12-13 months | Can stand alone without support initially then can take steps and walk | Manipulates and places toys, can do big piece basic jigsaw placing. |
| 18 months | Climbs onto furniture, needs to be strapped in high chair or buggy | Builds a tower of bricks, 3 high, one on top of each other |
| 2 years | Propels a sit on toy with their feet, throws a large ball. Can walk up steps with two feet on each step, unassisted. Can blow bubbles with reasonable accuracy. | Can turn pages in a book, can hold a pencil and draw lines and circles. Able to use a zipper and stack 5-6 bricks on top of each other as a tower. |
| 2 ½ years | Able to kick a ball, can jump from a low step. Bend down accurately and get up again without falling over | Can use a spoon and folk with a good degree of accuracy, builds a brink tower 7-10 blocks high. Drawers circles with more accuracy. |

7) How old is a child that can….. **roughly/approximately – 1 mark for each**

a) Run forwards and backwards? **18-24 months**  
 b) Button and unbutton clothes? **2 ½ - 3 ½ years-old**  
 c) Write their own name? **4-5 years-old**  
 d) Use joined up writing? **7-8 years-old**  
 e) Walk in a straight line? **2 – 2 ½ years-old**  
 f) Ride a bike on their own? **4-8 years-old**

8)

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| Primary Sexual Characteristics | |
| Aliyah - female | Rashid - male |
| *The uterus enlarges and the vagina lengthens* | *Enlargement of penis and testes, testes descend into scrotum sack* |
| *The ovaries start to mature and release eggs* | *Spontaneous erections caused by blood flowing into chambers in the penis* |
| *The menstrual cycle starts.* | *The testes produce sperm and ejaculation can occur* |

|  |  |
| --- | --- |
| ***Secondary Sexual Characteristics*** | |
| ***Aliyah*** | ***Rashid*** |
| *Breasts develop starting with the areola (the area around the nipple) swelling and darkening* | *Changes in the larynx (Adam’s apple) causing the voice to deepen.* |
| *Hair grows in armpits and pubic area* | *Hair grows in the armpit and pubic area, facial hair begins* |
| *Redistribution of body fat causing hips to widen* | *Redistribution of muscle tissue and fat* |

9) Perimenopausal physical symptoms – hot flushes, lowering of libido, breast tenderness, , fatigue/tiredness, Irregular periods, Vaginal dryness; discomfort during sex - **[write a full clear description of three of these, the impact]**

Perimenopausal psychological symptoms - worsening premenstrual syndrome moodiness, Irritability, Feelings of sadness, Lack of motivation, Anxiety, Aggressiveness, Difficulty concentrating - **[write a full clear description of three of these, the impact]**

10) During pregnancy **progesterone helps breast tissue to develop ready for lactation but also prevents lactation from starting** and then **oestrogen further develops breast tissue**, which happens early on in the pregnancy, so breasts feel fuller and heavier.

Once Yvonne gave birth to the baby’s hormone-producing placenta, the *oestrogen and progesterone levels in her body, suddenly dropped*. At the same time, the level of hormone, **prolactin** rises. **Prolactin** is a hormone secreted by the pituitary gland which is located at the base of the brain. It circulates in low levels in the bloodstream of non-pregnant women. During pregnancy, **prolactin** levels increase approximately ten-fold and stimulate milk formation, peaking just after the birth of Yvonne’s baby. [**1 mark each for naming the 3 hormones correctly and one mark for each by saying what role they play]**

11) **Changing hormone levels** in both men and women around 45 years of age, leads to the **slowing down of the metabolism** and undoubtedly then **leads to weight increase**. This excess weight tends to **accumulate around the tummy and waist area** and is referred to as middle aged spread. Adjustments are then needed with calorie intake and exercise to reduce this, to remain healthy

12) **[1 mark for identifying three changes from the below list, using correct terminologies and 1 mark for clear explanation, 6 in total] Reduction in skin elasticity**, as people get older, their skin **gets thinner,** **drier**, it starts to sag and is **less elastic, and less able to protect itself from damage**. UV light breaks down the collagen and elastin fibres in the skin. These fibres form the skin's connective tissue which keep skin firm and elastic.

**Receding gums** or gingival recession is again the an aging condition as **collagen tissues break down and general wear** as well as plaque build-up, cause the wearing away of the gums **exposing tooth roots** more.

**Hair colour pigment cells gradually die** causing hair to grow white, silver or grey and become more wiry and coarse. **Hair will** no longer contain as much melanin and **will** become a more transparent colour.

**Muscle decline** caused by changing hormones, redistributing fat, changing body shape.

**Menopause** occurs in women around 50 years-old, where **periods completely stop**.

13) **Gonadotropin hormone increases** in females as it **tries to stimulate failing egg production**

14) Sensorineural hearing loss is the **deterioration of the sensitive hair cells inside the inner ear** or **damage to the auditory nerve** over time causing hearing loss. **[1 mark for each point]**

15)Conductive hearing loss is can be caused by a **build up of hard ear wax due to additional hair growth in the outer ear** and wax hardening to a plug. **Sounds are prevented from entering the outer ear to vibrate the ear drum. [1 mark for 2 points made]**