

## MRCPath Part 1 in Histopathology

### Extended Matching Question (EMQ) samples

These sample questions will allow you to become familiar with the style of the questions that will be used in the MRCPath Histopathology Part 1 Examination. They also serve to illustrate the breadth of the topics that will be covered. Please note that this is not intended to be a “mock” examination and answers are therefore not provided.

#### QUESTION A

##### Option List

A	Analyser	J	Objectives
B	Binocular head	K	Polariser
C	Blue filter	L	Rheostat
D	Condenser iris	M	Stage
E	Eyepiece graticule	N	Substage condenser
F	Eyepieces	O	Tube
G	Iris diaphragm	P	Turret/nosepiece
H	Lamp	Q	Vernier scale
I	Neutral density filter		

For each of the following light microscope functions, select the key component from the list of options. Each option may be used once, more than once, or not at all.

- 1 This allows estimation of the area fraction of osteoid in a bone biopsy by point counting.
- 2 This allows linear measurements to be made with the microscope stage.
- 3 This produces a focused beam of light in the object plane of the slide.
- 4 This allows adjustment of light intensity without changing colour temperature.
- 5 Should be matched to the coverslip thickness.

## QUESTION B

### Option List

A	Alcian blue/PAS	G	Modified Giemsa
B	CAM 5.2	H	PAS with diastase
C	CD45	I	Perls
D	Chloracetate esterase	J	Smooth muscle myosin
E	GFAP	K	Ziehl-Neelsen
F	HMB45		

In each of the following situations, select the special stain most likely to help make a definitive diagnosis from the list of options. Each option may be used once, more than once, or not at all.

6 A 45 year old male presents with dyspepsia. A gastric biopsy shows a lymphoid filtrate with occasional follicular centres in the lamina propria, with occasional neutrophils in the foveolar epithelium.

7 A 30 year old female undergoes a cervical lymph node biopsy. Large aggregates of histiocytes with multinucleate giant cells are present, and several show areas of central necrosis.

8 A 75 year old female undergoes biopsy of a painful erythematous area on the tongue. The biopsy shows epithelial hyperplasia with collections of neutrophil polymorphs in superficial epithelial layers.

9 A 10 year old male presents with an urticarial rash that has faded to leave flat pigmented areas. A biopsy shows melanin in the superficial dermis, with large numbers of cells with granular cytoplasm, aggregated around dermal capillaries.

10 A 55 year old female with a history of breast cancer presents with increasing proptosis and a frozen right orbit. An orbital biopsy shows fibrotic tissue containing clusters and cords of hyperchromatic cells.

## QUESTION C

### Option List

A	Actinic keratosis	H	Lichen planus
B	Basal cell carcinoma	I	Malignant melanoma
C	Bowen's disease	J	Mycosis fungoides
D	Compound melanocytic naevus	K	Seborrhoeic keratosis
E	Intradermal melanocytic naevus	L	Simple lentigo
F	Junctional melanocytic naevus	M	Squamous cell carcinoma
G	Keratoacanthoma		

Each of these subjects has a skin biopsy. For each one, select the most likely condition from the list of options. Each option may be used once, more than once, or not at all.

11 A 40 year old man presents with erythroderma. Skin biopsy shows a band-like infiltrate of lymphoid cells with markedly infolded nuclear membranes. Similar cells invade the epidermis, both singly and in small clusters.

12 A 55 year old man presents with a history of a flesh-coloured, dome-shaped nodule on his nose, first appearing six weeks ago. Skin biopsy shows a central, keratin-filled crater surrounded by proliferating epithelial cells forming a distinct 'shoulder'.

13 A 28 year old red-haired woman presents with a pigmented lesion on her left lower leg that has changed in colour and started itching. Skin biopsy shows melanocytic cells with large nuclei and prominent nucleoli infiltrating epidermis and dermis.

14 A 70 year old man presents with a rounded, flat, tan-coloured plaque on his chest. Skin biopsy shows an exophytic lesion composed of sheets of small cells that resemble the basal cells of the normal epidermis.

15 A 68 year old man presents with a cutaneous horn on the dorsum of the left hand. Skin biopsy shows cytological atypia in the lowermost layers of the epidermis.