**1**

**Single-cell recordings are typically only carried out in:**

(A) Non-human animals

(B) Non-invasive studies

(C) Prefrontal cortex

(D) Serial reaction time tasks

**Answer:**
(A) Non-human animals

**2**

**Where did Aristotle believe that mental sensations arose from?**

(A) The liver

(B) The ventricles

(C) The brain

(D) The heart

**Answer:**
(D) The heart

**3**

**Who has suggested that functional imaging may be a "new phrenology"?**

(A) Gross (1998)

(B) Velmans (2000)

(C) Uttal (2001)

(D) Henson (2005)

**Answer:**
(C) Uttal (2001)

**4**

**Who has argued that functional imaging cannot inform cognitive theory because the latter does not make anatomical predictions?**

(A) Coltheart (2004)

(B) Henson (2005)

(C) Dehaene et al. (2001)

(D) Raichle (1998)

**Answer:**
(A) Coltheart (2004)

**5**

**The likely reason why the brain uses parallel search (e.g. in word recognition), over serial search, is because of:**

(A) Unlimited cognitive resources

**Answer:**
(B) Slow neural response time

(B) Slow neural response time

(C) Sensory bottleneck

(D) Poor spatial resolution

**6**

**In what domain of neuroscience is graph theory normally applied?**

(A) Distributions of neurotransmitters

(B) Electrical brain stimulation

(C) Mathematical modelling of networks

(D) Reductionism

**Answer:**
(C) Mathematical modelling of networks

**7**

**What is meant by "reductionism"**

(A) Mind and brain are two different levels of explanation for the same thing, but not two different kinds of thing

(B) The idea that different regions of the brain perform different functions

(C) The belief that mind-based concepts will eventually be replaced by purely biological constructs

(D) The belief that the mind and body are composed from different types of substance

**Answer:**
(C) The belief that mind-based concepts will eventually be replaced by purely biological constructs

**8**

**Just as reaction times are speeded up by the subliminal presentation of the same visual word beforehand, brain activation in which region is more efficient under the same circumstances?**

(A) Left fusiform cortex

(B) Right caudate nucleus

(C) Bilateral hippocampus

(D) Retrosplenial cortex

**Answer:**
(A) Left fusiform cortex

**9**

**Which of the following is NOT one of Fodor's properties of a module?**

**Answer:**

(A) Innateness

(B) Influenced by top-down processing

(C) Domain specificity

(D) Rapid processing

(B) Influenced by top-down processing

**10** **What is meant by a "domain-specific" process?**

(A) A process that operates on one specific type of information

(B) More advanced stages of processing can influence more basic ones

(C) Hierarchical processing in which smaller pieces of information combine into bigger ones

(D) A process that has a specific location in the brain

**Answer:**
(A) A process that operates on one specific type of information

**11** **Put the following four landmarks in cognitive neuroscience in chronological order, starting with the earliest: fMRI developed, EEG developed, TMS developed, CT scans developed:**

(A) EEG, CT, fMRI, TMS

(B) EEG, TMS, CT, fMRI

(C) CT, EEG, fMRI, TMS

(D) EEG, CT, TMS, fMRI

**Answer:**
(D) EEG, CT, TMS, fMRI

**12** **Which philosopher is associated with a "dual-aspect theory" of mind and brain?**

(A) Descartes

(B) Spinoza

(C) Churchland

(D) Dennett

**Answer:**
(B) Spinoza

**13** **Which philosopher is associated with a reductionist theory of mind and brain?**

**Answer:**

(A) Churchland

(B) Velmans

(C) Spinoza

(D) Descartes

(A) Churchland

**14**

**What additional insight into Broca's study of language localization did Wernicke and Lichtheim add?**

(A) That language may be localized in left frontal lobe

(B) That language is separate from other cognitive domains

(C) That comprehension and production may be separable processes

(D) That speaking and reading are distinct processes

**Answer:**
(C) That comprehension and production may be separable processes

**15**

**Which method is classed as an invasive procedure?**

(A) PET

(B) fMRI

(C) EEG

(D) TMS

**Answer:**
(A) PET

**16**

**Which method has the best spatial resolution?**

(A) EEG

(B) fMRI

(C) Reaction-time studies

(D) PET

**Answer:**
(B) fMRI

**17**

**TMS involves applying which of the following across the skull with a stimulating coil?**

(A) Pulsed light

**Answer:**
(B) Magnetic fields

(B) Magnetic fields

(C) Saline solution

(D) Electric fields

**18**

**Broadbent's (1958) model depicted a sequence of processing stages using:**

(A) EEG source localization

(B) Cytoarchitecture

(C) Bayesian analysis

(D) Box and arrow diagrams

**Answer:**
(D) Box and arrow diagrams

**19**

**What type of method is particularly linked to the work of Wilder Penfield?**

(A) Electrical stimulation of the brain

(B) Phrenology

(C) Functional MRI

(D) Transcranial magnetic stimulation

**Answer:**
(A) Electrical stimulation of the brain

**20**

**The approach of using patients with acquired brain damage to inform theories of normal cognition is called:**

(A) Cognitive neuropsychology

(B) Reductionism

(C) Information processing

(D) Psychoneurology

**Answer:**
(A) Cognitive neuropsychology

**21**

**What is meant by "top-down processing"?**

(A) Processing that operates on one specific type of information

(B) Hierarchical processing in which smaller pieces of information combine into bigger ones

**Answer:**
(C) More advanced stages of processing can influence more basic ones

(C) More advanced stages of processing can influence more basic ones

(D) Direct stimulation of the brain (e.g. electrically)

**22** **What is closely associated with Gall and Spurzheim?**

(A) Cognitive neuropsychology

(B) Phrenology

(C) Electrical brain stimulation

(D) Dualism

**Answer:**
(B) Phrenology

**23** **Who put forward a dualistic view of brain and mind?**

(A) Broca

(B) Churchland

(C) Descartes

(D) Fodor

**Answer:**
(C) Descartes

**24** **In connectionist models of cognition, what are the information-carrying units called?**

(A) Nodes

(B) Weights

(C) Modules

(D) Neurons

**Answer:**
(A) Nodes

**25** **In his anatomical drawings of the brain, which structure(s) did Vesalius (1514–1564) highlight in detail?**

(A) Cortical surface

(B) Ventricles

(C) Pineal gland

**Answer:**
(B) Ventricles

(D) Basal ganglia

**26** **Which method(s) have a spatial resolution at the single neuron level?**

(A) Single-cell recording only

(B) Single-cell recording and TMS

(C) TMS only

(D) Neither single-cell recording nor TMS

**Answer:**
(A) Single-cell recording only

**27** **What is the mind–body problem?**

(A) The belief that the mind and body are composed from different types of substance

(B) The problem of knowing whether other people have mental experiences

(C) The problem of finding which part of the body creates the mind

(D) The problem of how a physical substance can give rise to mental experience

**Answer:**
(D) The problem of how a physical substance can give rise to mental experience

**28** **Which of the following ideas most closely relates to Broca's studies of language?**

(A) Brain plasticity

(B) Top-down processing

(C) Functional specialization

(D) Distributed processing

**Answer:**
(C) Functional specialization

**29** **Which method has the best temporal resolution?**

(A) EEG

(B) fMRI

(C) PET

(D) Brain lesions

**Answer:**
(A) EEG

**30**

**Who discovered that applying electrical currents over certain regions of a dog's cortex can stimulate movement?**

(A) Berger (1929)

(B) Purkinje (1837)

(C) Fritsch and Hitzig (1870)

(D) Hodgkin and Huxley (1938)

**Answer:**
(C) Fritsch and Hitzig (1870)