Revision practice

GRE Subject Test · GRE Psychology

Apply the course version boundaries in notes.md; HSK tasks are transferable language practice, not a claimed HSK 3.0 mock.

■ Question 1

A researcher assigns volunteers randomly to two study methods. Identify what random assignment addresses and what volunteer recruitment still limits.

Worked answer

Random assignment reduces systematic confounding between groups. Volunteer recruitment may limit generalisability; assignment is not random sampling.

■ Question 2

A bell repeatedly precedes food and later evokes salivation. Identify the learned cue and distinguish reinforcement of a voluntary action.

Worked answer

The bell becomes a conditioned stimulus in classical conditioning. Operant reinforcement depends on consequences of an action, rather than a predictive cue-food pairing alone.

■ Question 3

A test is stable across administrations but systematically underestimates the target skill. Explain reliability and validity separately.

Worked answer

Stable measurements support test-retest reliability. Systematic underestimation challenges the proposed interpretation; reliability does not establish validity.

■ Question 4

A client shows intrusion and hyperarousal for six weeks after an assault. Which classification fits the duration criterion, and what would apply at ten days?

Worked answer

Beyond one month the post-traumatic stress disorder pattern can apply; at ten days the matching classification is acute stress disorder.

Question 5

In the diathesis-stress model, classify a family history of depression and a recent job loss.

Worked answer

The family history is the diathesis (pre-existing vulnerability); the job loss is the stress (later trigger). Neither factor establishes inevitability; their relation to risk is conditional.

Question 6

Why does a waitlist-controlled trial give stronger outcome evidence than pre-post measurement alone?

Worked answer

People often improve without treatment through spontaneous remission and regression to the mean; the comparison condition separates treatment gain from the natural course.

Question 7

Match each presentation to a first-line approach – a specific phobia, obsessive-compulsive rituals, and depression with hopeless thoughts.

Worked answer

Graduated exposure for the phobia; exposure with response prevention for the rituals; cognitive-behavioural restructuring plus behavioural activation for the depression.

Question 8

A test is given twice two weeks apart, r=.85; another study uses two parallel forms, r=.80. Name each reliability type.

Worked answer

Same test twice is test-retest reliability; two similar forms give alternate-forms reliability.

Question 9

With SD=15 and reliability .91, compute the standard error of measurement, and convert z=+2 to a Wechsler score.

Worked answer

SEM=15×sqrt(1−.91)=15×0.3=4.5. IQ=100+15×2=130.

Question 10

Each of 60 students is randomly assigned to one of three mnemonic conditions. Name the design and a suitable test for comparing the group means.

Worked answer

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A between-subjects true experiment; one-way analysis of variance for the three group means.

■ Question 11

In a 2×2 design the lines for the two levels of factor B cross between the levels of factor A. What does this indicate, and what is needed to claim that A mattered overall?

Worked answer

Crossing lines indicate an interaction, meaning the effect of A depends on the level of B. Claiming A mattered overall requires a significant main effect of A.

■ Question 12

A lifted-weight study finds Weber fraction k=.04. What change is detectable at a 200 g baseline, and at 50 g?

Worked answer

8 g and 2 g. The just noticeable difference is a fraction of the baseline, not a fixed amount.

■ Question 13

Observer X and observer Y both detect 80% of signals, but X has 5% false alarms and Y has 30%. Who is more sensitive, and what else differs?

Worked answer

X is more sensitive – equal hits with fewer false alarms mean better separated distributions (higher d′). Y additionally uses a looser criterion.

■ Question 14

Why does a stronger stimulus not produce a larger spike, and how is intensity coded instead?

Worked answer

The action potential is all-or-none once threshold is crossed at the axon hillock. Intensity is coded by firing rate and the number of active neurons.

■ Question 15

A drug blocks dopamine D2 receptors. Is it an agonist or antagonist, and what is one clinical use?

Worked answer

An antagonist; D2 blockade is the mechanism of typical antipsychotics for positive symptoms of schizophrenia.

■ Question 16

Order Piaget's four stages with one defining capacity each.

Worked answer

Sensorimotor (object permanence), preoperational (symbolic play, no conservation), concrete operational (conservation and reversible concrete operations), formal operational (controlled hypothesis testing).

■ Question 17

What does passing the false-belief task show, and what does intentional deceptive lying presuppose?

Worked answer

Passing shows the child understands that others can hold false beliefs; deceptive lying presupposes modelling what another person believes.

■ Question 18

Which two 1870s laboratories mark psychology's founding, and what did Titchener and James each ask?

Worked answer

Wundt at Leipzig and James at Harvard. Titchener analysed experience into elements by introspection (structuralism); James asked what mental processes are for (functionalism).

■ Question 19

Match Maslow, Skinner, Bandura and Beck to their central claims.

Worked answer

Maslow – hierarchy of needs and self-actualisation; Skinner – behaviour shaped by operant consequences; Bandura – observational learning and modelling; Beck – cognitive therapy targeting distorted thinking.

■ Question 20

A child avoids a cold bedroom because it is unpleasant, and avoidance grows stronger. Name the operant process and explain the sign.

Worked answer

Negative reinforcement – the behaviour strengthens because an aversive state is removed or prevented. It is not punishment, which decreases behaviour.

■ Question 21

A dog's salivation to a bell fades when food stops following the bell, then briefly returns after a week of rest. Name both phenomena.

Worked answer

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Extinction (CS without US weakens the CR), then spontaneous recovery after a pause.

■ Question 22

A list's first and last words are recalled best. Explain both ends of the serial position curve.

Worked answer

Primacy – early items are rehearsed into long-term memory; recency – the last items are still in the short-term store.

■ Question 23

After learning Spanish, a student's earlier French keeps intruding, and later the Spanish starts erasing the French. Name both directions of interference.

Worked answer

French intruding on Spanish is proactive interference (old disrupts new); Spanish erasing French is retroactive interference (new disrupts old).

■ Question 24

Split un-re-do-ing into morphemes, and say why letter count is the wrong measure.

Worked answer

Four morphemes (un, re, do, ing). Morphemes are meaning-bearing units; a morpheme can be one letter or several.

■ Question 25

A listener hears a sound midway between /b/ and /p/ as clearly one phoneme. Name the phenomenon and its implication for speech categories.

Worked answer

Categorical perception – continuous acoustic variation is perceived as discrete phoneme categories, so within-category differences are hard to hear.

■ Question 26

A voter estimates crime as rising because a recent vivid case comes to mind, then reads only reports that agree. Name both processes.

Worked answer

Availability heuristic (ease of recall inflates judged frequency) and confirmation bias (seeking only supporting evidence).

■ Question 27

Contrast Spearman's and Cattell's accounts of intelligence structure in one sentence each.

Worked answer

Spearman proposed a single general factor g underlying test performance; Cattell

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separated fluid reasoning about novelty from crystallised learned knowledge.

■ Question 28

A manager blames a late report on an employee's laziness, ignoring the power cut. Name the error and its self-directed counterpart.

Worked answer

The fundamental attribution error – disposition over situation for others. For ourselves the actor-observer asymmetry favours situational explanations.

■ Question 29

A voter adopts a candidate after evaluating policy arguments, and a second voter after liking the candidate's smile. Compare the routes and their durability.

Worked answer

The first is central-route persuasion, durable because arguments were evaluated; the second is peripheral-route, cue-based and fragile.

■ Question 30

Why do skilled cyclists ride faster with an audience while novices ride worse, and why do tug-of-war teams underperform?

Worked answer

Social facilitation strengthens dominant (well-learned) responses and weakens novel ones. Tug-of-war shows social loafing when individual pulls are unidentifiable.

■ Question 31

In a crowded plaza nobody helps a collapsed passer-by. Name two mechanisms, and one feature that restores helping.

Worked answer

Diffusion of responsibility and pluralistic ignorance. A clearly identified single victim or a direct request to a specific person restores helping.

■ Question 32

Why does a hands-free phone call still slow braking, and which theory explains the shared-demand cost?

Worked answer

The bottleneck is central capacity, not occupied hands; multimode theory (Johnston and Heinz) moves the selection point with combined task demands.

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■ Question 33

A commuter stops hearing the nightly train, then notices it again when the schedule changes. Name both processes and why neither is conditioning.

Worked answer

Habituation (decline to repetition) and dishabituation (recovery to change). No stimulus pairing is involved, so they are non-associative.

■ Question 34

Using Hamilton's rule, decide whether helping pays for r=.5, B=6, C=2 and for r=.25, B=6, C=2.

Worked answer

rB>C: sibling case $0.5\times6=3>2$ pays; r=.25 gives $1.5<2$, does not pay. Help is ordered by relatedness.

■ Question 35

A goose rolls a doorknob into its nest as if it were an egg. Name the behaviour pattern and the stimulus phenomenon.

Worked answer

A fixed action pattern released by a sign stimulus; the oversized doorknob acts as a supernormal stimulus.

■ Question 36

Rank these study tasks by later recall and name the theory – counting letters, judging rhyme, judging sentence fit, generating an example sentence.

Worked answer

Generation > sentence fit > rhyme > letter counting. Levels of processing: depth and elaboration, not intention, build the trace.

■ Question 37

When can phonemic (rhyme) encoding beat semantic encoding, and what is the principle?

Worked answer

When the test probes rhyme recognition. Transfer-appropriate processing: the encoding matching the retrieval demand wins.

■ Question 38

Order the HPA cascade from stressor to cortisol and name the fast parallel pathway.

Worked answer

Hypothalamus (CRH) to pituitary (ACTH) to adrenal cortex (cortisol); in parallel the sympathetic-adrenal-medullary path releases adrenaline within seconds.

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■ Question 39

Which hormone prepares the uterus for implantation, and how can a bloodstream-wide hormone act on only one organ?

Worked answer

Progesterone. Circulating hormone affects only cells carrying its receptor, so action is selective despite broadcast delivery.

■ Question 40

A country of 2 million records 4,000 new cases of a disorder this year and 30,000 current cases. Compute the incidence rate per 100,000 and the prevalence per cent.

Worked answer

Incidence 4,000/2,000,000 = 200 per 100,000 per year; prevalence 30,000/2,000,000 = 1.5%.

■ Question 41

Order the evidence ladder and give the direction each observational design looks in time.

Worked answer

Case report, case-control (backward from outcome), cohort (forward from exposure), randomised trial, meta-analysis.

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