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| **2.** | **Základní znalosti z biologie ryb a vodních organismů** |

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| **1.** | **Co je to plankton?** |
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|  |  |
| --- | --- |
| a) | drobné vodní organismy vznášející se ve vodním sloupci |
| b) | vodní organismy s mohutným aktivním pohybem |
| c) | preparát urychlující výtěr ryb |

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| **2.** | **Co je to trdliště?** |
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| --- | --- |
| a) | místo přirozeného rozmnožování ryb |
| b) | stanoviště ryb v zimním období |
| c) | sádka využívaná k odchovu lososovitých ryb |

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| **3.** | **Co je to inkubace jiker?** |
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| --- | --- |
| a) | období vývoje zárodku v jikře |
| b) | vývoj jiker ve vaječnících jikernaček |
| c) | kulení plůdku z jiker |

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| **4.** | **Který z uvedených orgánů kapr nemá?** |
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|  |  |
| --- | --- |
| a) | žaludek |
| b) | hltan |
| c) | jícen |

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| **5.** | **Má úhoř říční šupiny?** |
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|  |  |
| --- | --- |
| a) | ano |
| b) | ne |
| c) | ano, ale jen při základu ploutví |

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| **6.** | **Jaké postavení úst má plotice obecná?** |
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| --- | --- |
| a) | střední |
| b) | spodní |
| c) | horní |

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| **7.** | **Jaké postavení úst má ouklej obecná?** |
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| --- | --- |
| a) | horní |
| b) | střední |
| c) | spodní |

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| **8.** | **Co je to bentos?** |
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|  |  |
| --- | --- |
| a) | společenstvo organismů žijících na dně |
| b) | drobné vodní organismy vznášející se ve vodním sloupci |
| c) | hydrobiologické označení břehu |

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| **9.** | **Která z následujících ryb má typické spodní postavení úst?** |
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|  |  |
| --- | --- |
| a) | pstruh obecný potoční |
| b) | jelec tloušť |
| c) | jeseter malý |

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| **10.** | **Která z následujících druhů ryb má střední postavení úst?** |
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|  |  |
| --- | --- |
| a) | štika obecná |
| b) | ouklej obecná |
| c) | podoustev říční |

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| **11.** | **Z uvedené skupiny ryb označ ty, které mají tukovou ploutvičku?** |
|  |

|  |  |
| --- | --- |
| a) | vranka obecná, slunečnice pestrá, perlín ostrobřichý, střevle potoční |
| b) | sumeček americký, losos obecný, hlavatka obecná, lipan podhorní |
| c) | piskoř pruhovaný, mřenka mramorovaná, cejn velký, štika obecná |

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| **12.** | **Který z uvedených jelců má vypouklý tvar hřbetní a řitní ploutve?** |
|  |

|  |  |
| --- | --- |
| a) | tloušť |
| b) | jesen |
| c) | proudník |

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| **13.** | **Odkud pochází původní forma pstruha duhového?** |
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|  |  |
| --- | --- |
| a) | ze Severní Ameriky |
| b) | z Jižní Ameriky |
| c) | z Asie |

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| **14.** | **Které z následujících ryb nemají tělo kryto šupinami?** |
|  |

|  |  |
| --- | --- |
| a) | úhoř říční, piskoř pruhovaný, siven americký |
| b) | sumeček americký, sumec velký, vranka obecná |
| c) | mník jednovousý, lín obecný, karas obecný |

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| **15.** | **Jaké postavení úst má okoun říční?** |
|  |

|  |  |
| --- | --- |
| a) | střední |
| b) | spodní |
| c) | horní |

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| **16.** | **Kdy se vytírá mník jednovousý?** |
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|  |  |
| --- | --- |
| a) | prosinec - leden |
| b) | březen - duben |
| c) | říjen - listopad |

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| **17.** | **Která z našich ryb má největší játra?** |
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| --- | --- |
| a) | štika obecná |
| b) | mník jednovousý |
| c) | sumec velký |

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| **18.** | **Kde leží u ryb ledviny?** |
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|  |  |
| --- | --- |
| a) | vedle jater |
| b) | mezi kličkami střev |
| c) | těsně pod páteří |

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| **19.** | **Čím jsou chráněny žábry před poškozením?** |
|  |

|  |  |
| --- | --- |
| a) | skřelemi |
| b) | šupinami |
| c) | kůží |

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| **20.** | **K čemu slouží žaberní aparát ryb?** |
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|  |  |
| --- | --- |
| a) | k okysličování krve |
| b) | k rozmělnění potravy |
| c) | k pohybu |

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| **21.** | **Jaké postavení úst má hrouzek obecný?** |
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|  |  |
| --- | --- |
| a) | spodní |
| b) | střední |
| c) | horní |

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| **22.** | **Jaké postavení úst má cejn velký?** |
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| --- | --- |
| a) | spodní |
| b) | střední |
| c) | horní |

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| **23.** | **Kolik komor a předsíní má rybí srdce?** |
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|  |  |
| --- | --- |
| a) | 1 + 1 |
| b) | 1 + 2 |
| c) | 2 + 2 |

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| **24.** | **Jaká krev proudí srdcem ryby?** |
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|  |  |
| --- | --- |
| a) | neokysličená |
| b) | okysličená |
| c) | smíšená |

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| **25.** | **Která z našich ryb má oko chráněno dvojitou rohovkou?** |
|  |

|  |  |
| --- | --- |
| a) | úhoř |
| b) | mník |
| c) | vranka |

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| **26.** | **Mají ryby chuť?** |
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| --- | --- |
| a) | ano |
| b) | ne |
| c) | jen ryby dravé |

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| **27.** | **Co je to postranní čára?** |
|  |

|  |  |
| --- | --- |
| a) | pohlavní rozlišovací znak |
| b) | smyslový orgán |
| c) | pomocný dýchací orgán |

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| **28.** | **Která kaprovitá ryba má na tlamě masité vousky?** |
|  |

|  |  |
| --- | --- |
| a) | karas obecný |
| b) | ouklej obecná |
| c) | lín obecný |

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| **29.** | **Co jsou to gonády ryb?** |
|  |

|  |  |
| --- | --- |
| a) | hřbetní paprsky |
| b) | vyměšovací orgány |
| c) | pohlavní orgány |

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| **30.** | **Co je to hypofýza?** |
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|  |  |
| --- | --- |
| a) | nemoc ledvin |
| b) | podvěsek mozkový |
| c) | nemoc mozku |

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| **31.** | **Které z následujících ryb pečují o své jikry i po výtěru?** |
|  |

|  |  |
| --- | --- |
| a) | sumec velký, sumeček americký |
| b) | lipan podhorní, siven americký |
| c) | kapr obecný, karas obecný |

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| **32.** | **Jaké postavení úst má parma obecná?** |
|  |

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| --- | --- |
| a) | spodní |
| b) | střední |
| c) | horní |

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| **33.** | **Kolik druhů ryb žije v našich vodách (v ČR)?** |
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|  |  |
| --- | --- |
| a) | 10 - 20 |
| b) | 30 - 40 |
| c) | 50 a více |

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| **34.** | **Ve kterém světovém oceánu se rozmnožuje úhoř říční?** |
|  |

|  |  |
| --- | --- |
| a) | Atlantský |
| b) | Tichý |
| c) | Indický |

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| **35.** | **Která ryba má na spodní čelisti jeden jediný vous, jako mají tresky?** |
|  |

|  |  |
| --- | --- |
| a) | sumec |
| b) | mník |
| c) | sekavec |

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| **36.** | **Které části rybího těla slouží k určení stáří?** |
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|  |  |
| --- | --- |
| a) | ocasní ploutev |
| b) | vousky |
| c) | šupiny |

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| **37.** | **Mění se teplota rybího těla s teplotou vody?** |
|  |

|  |  |
| --- | --- |
| a) | ano |
| b) | ne |
| c) | zůstává stejná |

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| **38.** | **Která kaprovitá ryba má typicky červenou duhovku oka?** |
|  |

|  |  |
| --- | --- |
| a) | kapr obecný |
| b) | bolen dravý |
| c) | plotice obecná |

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| **39.** | **Která z ryb čeledi kaprovitých se v dospělosti živí zejména rybkami?** |
|  |

|  |  |
| --- | --- |
| a) | karas stříbřitý |
| b) | jelec proudník |
| c) | bolen dravý |

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| **40.** | **Vranka obecná se pohybuje poskoky (střelkovitě). Proč neplave jako ostatní ryby?** |
|  |

|  |  |
| --- | --- |
| a) | chybí jí plynový měchýř |
| b) | nemá všechny ploutve |
| c) | chybí jí postranní čára |

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| **41.** | **Která z těchto ryb žije v především v proudné vodě?** |
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|  |  |
| --- | --- |
| a) | lín obecný |
| b) | blatňák tmavý |
| c) | lipan podhorní |

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| **42.** | **V jako vodě se nejlépe daří našim rybám?** |
|  |

|  |  |
| --- | --- |
| a) | silně kyselé |
| b) | silně zásadité |
| c) | neutrální |

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| **43.** | **Zelené vodní rostliny vyrábějí kyslík:** |
|  |

|  |  |
| --- | --- |
| a) | jen ve dne |
| b) | jen v noci |
| c) | ani ve dne, ani v noci |

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| **44.** | **Které následující druhy patří mezi plankton?** |
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|  |  |
| --- | --- |
| a) | larva chrostíka, potápník vroubený |
| b) | škeble, perlorodka |
| c) | buchanka, perloočka |

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| **45.** | **Co patří mezi bentos?** |
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| a) | červené larvy pakomára, beruška vodní |
| b) | mřenka mramorovaná |
| c) | dafnie |

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| **46.** | **Kdy se u nás vytírá štika obecná?** |
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| a) | v březnu až dubnu |
| b) | v prosinci až lednu |
| c) | v květnu až červnu |

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| **47.** | **Která ryba má hadovitý tvar těla?** |
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| --- | --- |
| a) | jelec tloušť |
| b) | cejn velký |
| c) | piskoř pruhovaný |

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| **48.** | **Které ploutve má úhoř říční párové (sudé)?** |
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| a) | břišní |
| b) | prsní |
| c) | hřbetní |

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| **49.** | **Která z následujících ryb má zadní postavení hřbetní ploutve?** |
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| --- | --- |
| a) | kapr obecný |
| b) | štika obecná |
| c) | siven americký |

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| **50.** | **Které z následujících ryb chybí břišní ploutve?** |
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| --- | --- |
| a) | slunečnici pestré |
| b) | mníku jednovousému |
| c) | úhoři říčnímu |

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| **51.** | **Která naše ryba nemá vůbec vyvinuté šupiny?** |
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| --- | --- |
| a) | mník jednovousý |
| b) | vranka obecná |
| c) | slunečnice pestrá |

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| **52.** | **Která naše ryba má šupiny i na spánkové části hlavy?** |
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| --- | --- |
| a) | kapr obecný |
| b) | mník jednovousý |
| c) | štika obecná |

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| **53.** | **U které naší kaprovité ryby je červená barva většiny ploutví jedním z důležitých rozpoznávacích znaků?** |
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| --- | --- |
| a) | jelec jesen |
| b) | perlín ostrobřichý |
| c) | plotice obecná |

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| **54.** | **Která naše ryba má šupiny tak hluboce zasazené ve škáře, že se její tělo zdá na první pohled hladké?** |
|  |

|  |  |
| --- | --- |
| a) | sumec velký |
| b) | úhoř říční |
| c) | pstruh obecný |

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| **55.** | **Kde se vytírá losos obecný?** |
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| a) | v řekách |
| b) | v mořích |
| c) | v brakických vodách |

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| **56.** | **Které ryby mají požerákové zuby?** |
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| --- | --- |
| a) | kaprovité a lososovité |
| b) | sekavcovité a kaprovité |
| c) | jen ryby kaprovité |

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| **57.** | **Která z našich ryb nemá zcela kostěnou páteř?** |
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|  |  |
| --- | --- |
| a) | úhoř říční |
| b) | mník jednovousý |
| c) | jeseter malý |

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| **58.** | **Má bolen dravý žaludek?** |
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| --- | --- |
| a) | ano |
| b) | ne |
| c) | jen v dospělosti |

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| **59.** | **Čím jsou žábry ryb chráněny před poškozením?** |
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| --- | --- |
| a) | nejsou chráněny |
| b) | šupinami |
| c) | skřelemi |

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| **60.** | **Která ryba má přídavné střevní dýchání?** |
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|  |  |
| --- | --- |
| a) | úhoř říční |
| b) | blatňák tmavý |
| c) | piskoř pruhovaný |

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| **61.** | **Které ryby nemají plynový měchýř?** |
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|  |  |
| --- | --- |
| a) | kaprovité |
| b) | vrankovité |
| c) | lososovité |

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| **62.** | **Při zvětšení objemu plynů v plynovém měchýři ryba:** |
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| --- | --- |
| a) | stoupá |
| b) | klesá |
| c) | vyráží prudce vpřed |

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| **63.** | **Jestliže se u ryb s dvojitým plynovým měchýřem (kaprovité) zvětší objem v zadní části měchýře a ryba se při tom pohybuje vpřed, bude tato ryba plavat:** |
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| --- | --- |
| a) | šikmo vzhůru |
| b) | prudce vpřed |
| c) | šikmo dolů |

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| **64.** | **Kde je umístěna postranní čára ryby?** |
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| --- | --- |
| a) | podél hřbetu ryby |
| b) | podél břišní části těla ryby |
| c) | je vedena středem boků ryby |

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| **65.** | **Kolik vousků má kapr obecný?** |
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|  |  |
| --- | --- |
| a) | 2 |
| b) | 4 |
| c) | 6 |

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| **66.** | **Kolik vousků má sumeček americký?** |
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| --- | --- |
| a) | 8 |
| b) | 10 |
| c) | 12 |

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| **67.** | **Kolik vousků má piskoř pruhovaný?** |
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|  |  |
| --- | --- |
| a) | 6 |
| b) | 8 |
| c) | 10 |

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| **68.** | **Kolik vousků má sumec velký?** |
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|  |  |
| --- | --- |
| a) | 4 |
| b) | 6 |
| c) | 8 |

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| **69.** | **Která z uvedených ryb se při vyhledávání potravy orientuje především zrakem?** |
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| --- | --- |
| a) | sumec velký |
| b) | mník jednovousý |
| c) | štika obecná |

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| **70.** | **Který z uvedených živočichů může napadat plůdek ryb?** |
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| a) | komár pisklavý |
| b) | dafnie velká |
| c) | potápník vroubený a jeho larvy |

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| **71.** | **Která dvojice ryb má dva vousky?** |
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|  |  |
| --- | --- |
| a) | hrouzek obecný a ostroretka stěhovavá |
| b) | hrouzek obecný a lín obecný |
| c) | mřenka mramorovaná a ostroretka stěhovavá |

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| **72.** | **Která trojice ryb má čtyři vousky?** |
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| --- | --- |
| a) | parma říční, jeseter malý a kapr obecný |
| b) | parma říční, sekavec písečný a kapr obecný |
| c) | jeseter malý, mřenka mramorovaná a lín obecný |

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| **73.** | **Mihule říční patří mezi:** |
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| --- | --- |
| a) | ryby úhořovité |
| b) | paryby |
| c) | živočichy kruhoústé |

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| **74.** | **Do které čeledi ryb patří ježdík obecný?** |
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| --- | --- |
| a) | kaprovité |
| b) | sekavcovité |
| c) | okounovité |

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| **75.** | **Amur bílý patří do čeledi ryb?** |
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| --- | --- |
| a) | kaprovité |
| b) | lososovité |
| c) | okounovité |

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| **76.** | **Bolen dravý patří do čeledi ryb?** |
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| a) | kaprovité |
| b) | štikovité |
| c) | okounovité |

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| **77.** | **Která trojice ryb se v dospělosti živí převážně rybami?** |
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| --- | --- |
| a) | štika obecná, parma obecná a candát obecný |
| b) | štika obecná, bolen dravý a candát obecný |
| c) | štika obecná, okoun říční a ouklej obecná |

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| **78.** | **Která trojice ryb je typická pro oblast pstruhového pásma?** |
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| --- | --- |
| a) | pstruh obecný, slunečnice pestrá a okounek pstruhový |
| b) | pstruh obecný, vranka obecná a střevle potoční |
| c) | okounek pstruhový, střevle potoční a vranka obecná |

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| **79.** | **Co je to řemenatka?** |
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| --- | --- |
| a) | virus způsobující zduření ledvin u pstruhů |
| b) | rybí cizopasník |
| c) | bakterie způsobující skvrnitost ryb |

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| **80.** | **Chobotnatka rybí patří mezi:** |
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| --- | --- |
| a) | roztoče |
| b) | ploštice |
| c) | kroužkovce |

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| **81.** | **Co je to kapřivec?** |
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| a) | rybí parazit |
| b) | kříženec kapra a jelce |
| c) | vyřazený generační kapr |

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| **82.** | **Chrostíci patří mezi:** |
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| --- | --- |
| a) | korýše |
| b) | červy |
| c) | hmyz |

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| **83.** | **Larva potápníka je:** |
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| --- | --- |
| a) | dravá |
| b) | býložravá |
| c) | všežravá |

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| **84.** | **Na čem nejvíce záleží doba tření kaprovitých ryb?** |
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| --- | --- |
| a) | na obsahu kyslíku ve vodě |
| b) | na množství potravy |
| c) | na teplotě vody |

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| **85.** | **Ve kterých ročních obdobích se třou lososovité ryby?** |
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|  |  |
| --- | --- |
| a) | podzim a jaro |
| b) | léto |
| c) | zima |

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| **86.** | **Která z našich ryb klade jikry do žaberních systémů mlžů?** |
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|  |  |
| --- | --- |
| a) | piskoř pruhovaný |
| b) | okounek pstruhový |
| c) | hořavka duhová |

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| **87.** | **U kterých ryb můžeme v dospělosti rozpoznat mlíčáka od jikernačky pomocí velikosti břišních ploutví?** |
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|  |  |
| --- | --- |
| a) | lína obecného |
| b) | kapra obecného |
| c) | štiky obecné |

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